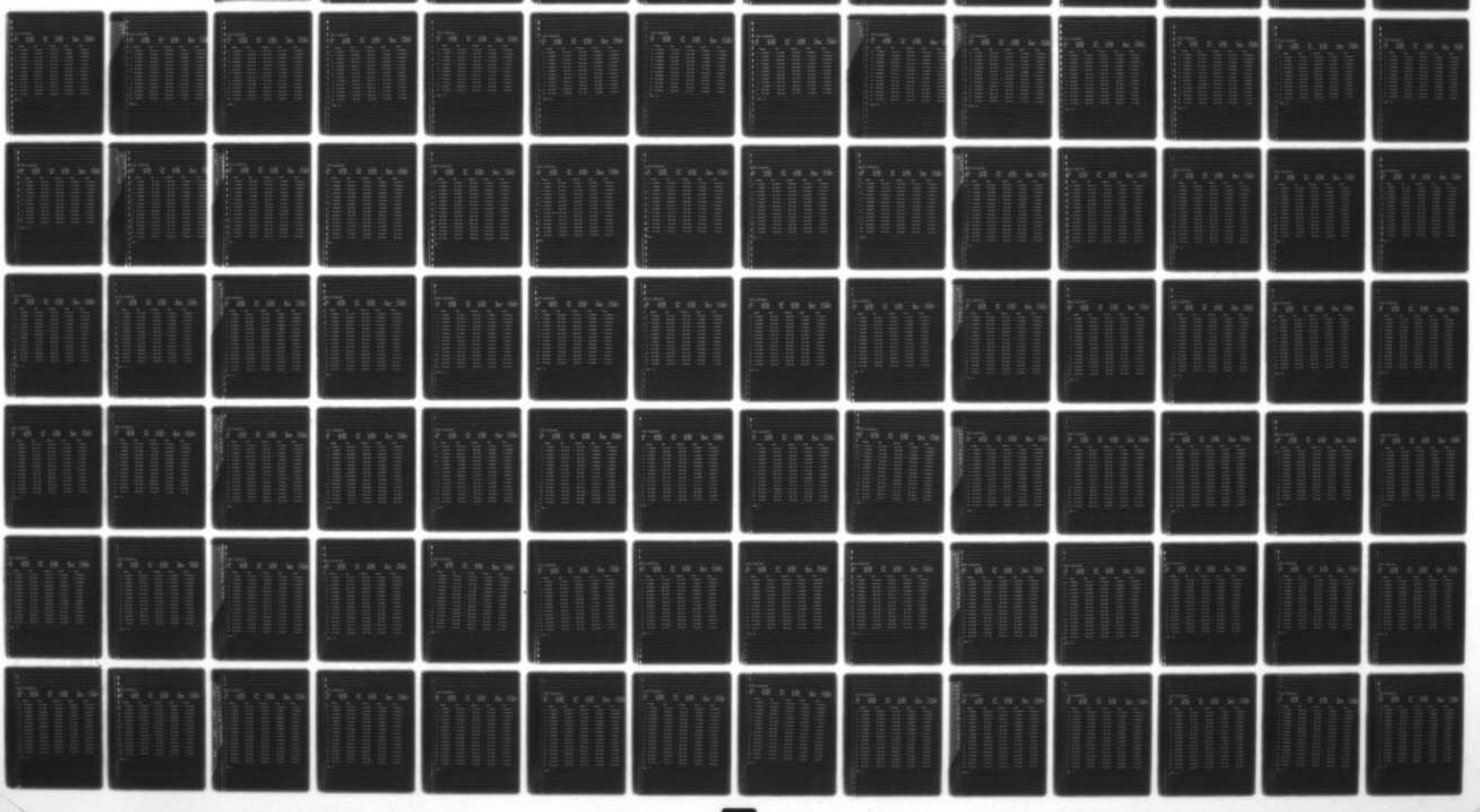
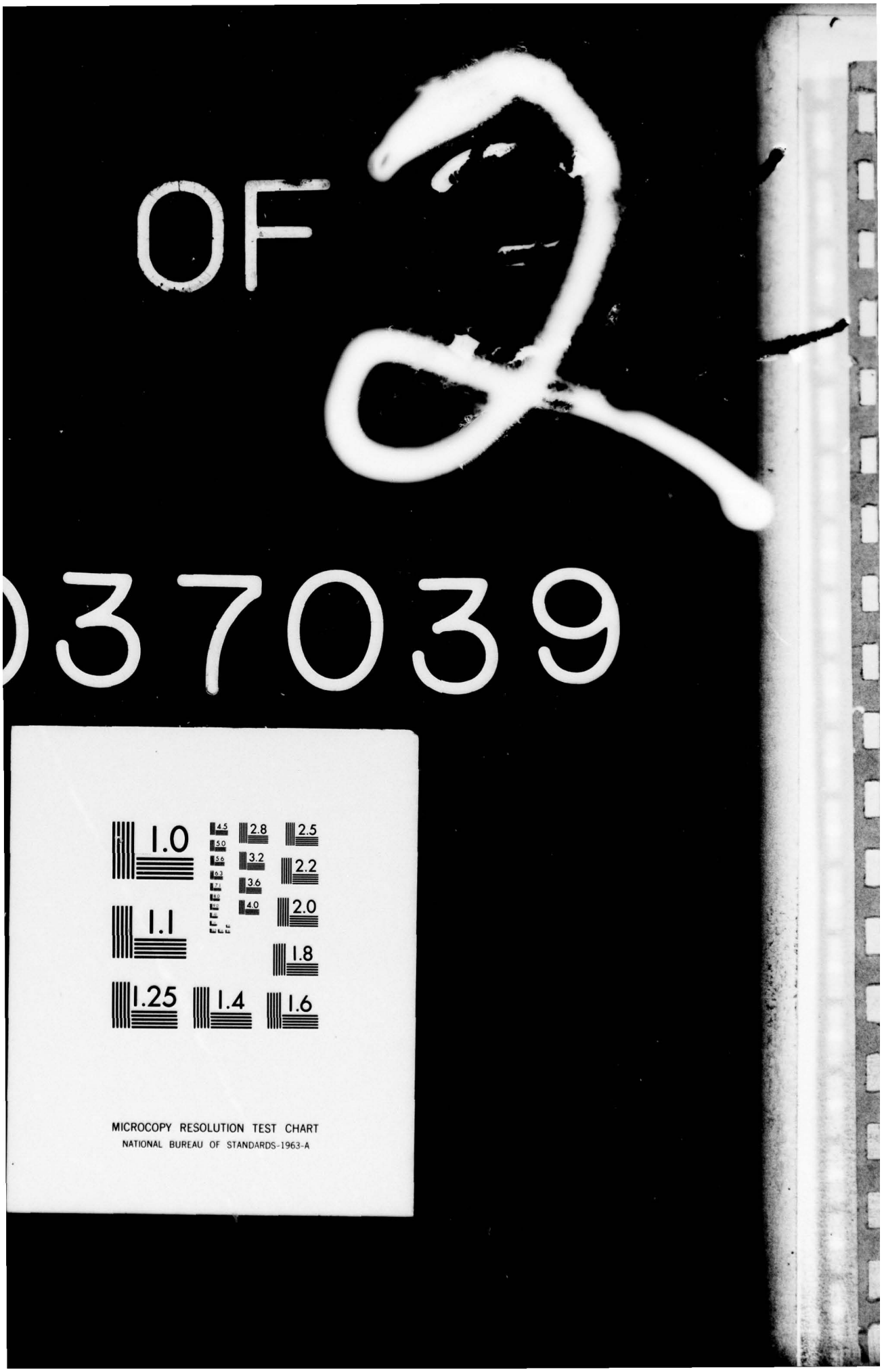
AD-A037 039 NAVY ELECTRONICS LAB SAN DIEGO CALIF F/G 17/1
SURFACE CHANNEL PROPAGATION LOSS. FREQUENCY 9 KC/S. GAMMA 0 .01--ETC(U)
SEP 66

UNCLASSIFIED NL

1 OF 2
AD A037039




OF
037039
1.0
1.1
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4.5
5.0
5.6
6.3
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

TECHNICAL DATA

(11) 9 Sep 66

(12) 218

(6)

SURFACE CHANNEL PROPAGATION

FREQUENCY

9 Kc/s,

GAMMA ø .018
GAMMA 1 −.333,

LAYER DE

50, 100, 150
200, 300, 50

GP-1

U. S. Navy Electronics Laboratory | San Diego, Calif

CODE 3110D TECHNICAL DATA

The enclosed Technical Data were computed using a surface channel prediction model developed at the U. S. Navy Electronics Laboratory in San Diego. These results have been compiled for use by personnel at NEL and other Naval Laboratories in predicting sonar system performance in the surface channel propagation mode. These data are not to be considered an official NEL Report. It is hoped that a limited distribution of this information will also facilitate the comparison of these predictions with the results of fleet operational tests.

9 September 1966

U. S. NAVY ELECTRONICS LABORATORY
SAN DIEGO, CALIFORNIA 92152

A

INTRODUCTION

The enclosed propagation loss data have been obtained using a computational prediction program developed by NEL Code 3110D. These loss data have been compiled in order to provide a convenient reference manual for use in surface channel sonar predictions.

These computations were carried out using Surface Channel Propagation Loss Model (I) which has been described in NEL Tech Memo 921 (1). This prediction model computes propagation loss from the expression:

PROPAGATION LOSS = SPREADING LOSS + SURFACE SCATTERING LOSS + ABSORPTION LOSS,

The spreading loss is calculated by use of Normal-Mode expressions developed by NEL Code 3185 (2).

Surface scattering loss is calculated from the expressions developed by Marsh and Schulkin which appear in the "AMOS" Report (3). These basic "AMOS" expressions have been modified to allow the velocity gradient in the layer to vary, and to also exhibit a more gradual transition between low and high sea-state conditions.

Absorption loss is calculated from the expressions of Marsh and Schulkin which are given in the "AMOS" Report (3).

UNITS AND DEFINITION OF SYMBOLS

SYMBOL	DESCRIPTION
ZTG	Target Depth in Feet.
TEMP	Surface Water in Degrees F.
LWA	Wave Height in Feet.
ZL	Layer Depth in Feet.
ZX	Source Depth in Feet.
CS	Surface Sound Velocity in FT/SEC.

UNITS AND DEFINITION OF SYMBOLS, Continued

SYMBOL	DESCRIPTION
FREQ	Frequency in KC/Sec.
GAMMA0	Gradient within Layer in FPS/FT.
GAMMA1	Gradient Below Layer in FPS/FT.
HSC	Total One-Way Propagation Loss in dB.
HSCUM	Total Two-Way Propagation Loss in dB.
HSSC	One-Way Surface Scattering Loss in dB.
HKSC	One-Way Absorption Loss in dB.

The computed results have been presented in tabular form to give one-way propagation loss, two-way propagation loss, one-way surface scattering loss, and one-way absorption loss for a series of horizontal range values.

The data in this manual was computed for the following constant conditions:

FREQUENCY = 9 KC

SOURCE DEPTH = 20 FT.

GRADIENT IN LAYER = .018 FPS/FT.

GRADIENT BELOW LAYER = -.3333 FPS/FT.

SURFACE WATER TEMPERATURE = 60 DEGREES F.

SURFACE SOUND VELOCITY = 4947 FPS.

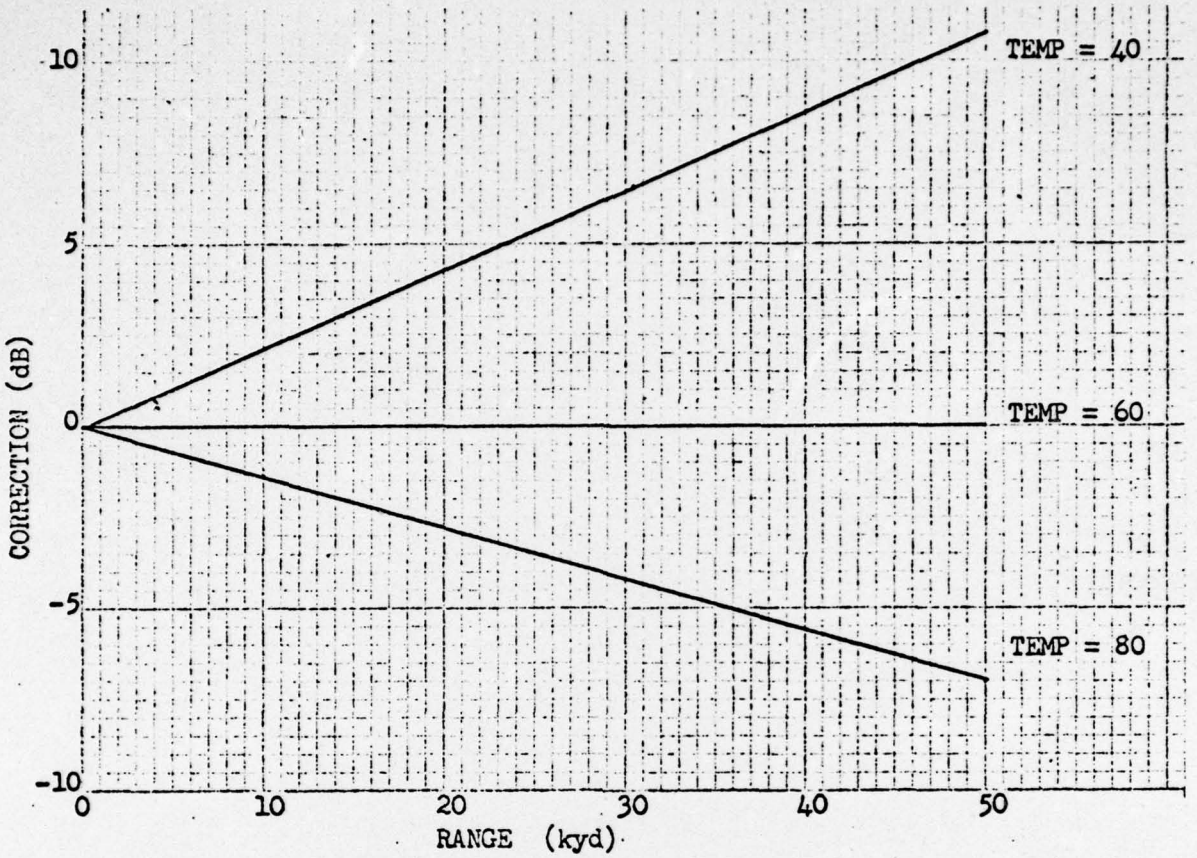
Computations have been carried out for several values of layer depth, target depth, and wave height. Six values of layer depth were selected, and for each of these six layer depths four and sometimes five associated target depths were used.

The layer depths selected are 50 FT, 100 FT, 150 FT, 200 FT, 300 FT, and 500 FT. The computed print-outs for these various depths are indexed with visible external tabs. For each of these layer depths the target depth was fixed at periscope depth, layer depth, 100 FT below the layer, and at the depth computed from the expression $30\sqrt{\text{LAYER DEPTH}}$. For the 300 FT and 500 FT layers a mid-channel target was also included.

For each layer depth and associated target depth, a series of loss computations were carried out for wave heights of 1, 2, 3, 4, 6, 8, and 10 FT.

The resulting data have been organized by labeled separators in order to facilitate finding a particular set of data. Each tabulated page includes a list of the input parameters which apply.

For sea surface temperatures which differ from the 60 Degrees Fahrenheit used in the computations, a slight correction can be carried out by using the following temperature correction curves. The corrections indicated are for one-way propagation and should be doubled for two-way cases.



REFERENCES

1. Watson, W. H. and McGirr, R. W., A Surface Channel Propagation Loss Model (I), NEL Tech Memo 921, 30 March 1966.

2. Pedersen, M. A. and Gordon, D. F., "Normal-Mode Theory Applied to Short-Range Propagation in an Underwater Acoustic Surface Duct", JASA Volume 37, No. 1, Jan 1956.

3. Marsh, Jr., H. W. and Schulkin, Morris, Report on the Status of Project AMOS (Acoustic, Meteorological, and Oceanographic Survey)", USL/Report 255, 21 March 1955.

ZL 50

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.9984	123.997	1.93178	0.483212
1	1.50000	66.1784	132.357	2.89766	0.724818
2	2.00000	69.5815	139.163	3.86355	0.966423
3	3.00000	75.0909	150.182	5.79533	1.44964
4	4.00000	79.5970	159.194	7.72710	1.93285
5	5.00000	83.5306	167.061	9.65888	2.41606
6	6.00000	87.1201	174.240	11.5907	2.89927
7	8.00000	93.7247	187.449	15.4542	3.86569
8	10.0000	99.9087	199.817	19.3178	4.83212
9	15.0000	114.449	228.897	28.9766	7.24818
10	20.0000	128.244	256.489	38.6355	9.66423
11	25.0000	141.604	283.207	48.2944	12.0803
12	30.0000	154.685	309.370	57.9533	14.4964
13	40.0000	180.355	360.709	77.2710	19.3285
14	50.0000	205.652	411.304	96.5888	24.1606

ZTG

35

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.0281	124.056	1.96148	0.483212
1	1.50000	66.2230	132.446	2.94222	0.724818
2	2.00000	69.6410	139.282	3.92296	0.966423
3	3.00000	75.1800	150.360	5.88443	1.44964
4	4.00000	79.7158	159.432	7.84591	1.93285
5	5.00000	83.6791	167.358	9.80739	2.41606
6	6.00000	87.2983	174.597	11.7689	2.89927
7	8.00000	93.9624	187.925	15.6918	3.86569
8	10.0000	100.206	200.411	19.6148	4.83212
9	15.0000	114.894	229.788	29.4222	7.24818
10	20.0000	128.838	257.677	39.2296	9.66423
11	25.0000	142.346	284.692	49.0369	12.0803
12	30.0000	155.576	311.153	58.8443	14.4964
13	40.0000	181.543	363.085	78.4591	19.3285
14	50.0000	207.137	414.274	98.0739	24.1606

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.3380	124.676	2.27145	0.483212
1	1.50000	66.6879	133.376	3.40718	0.724818
2	2.00000	70.2609	140.522	4.54290	0.966423
3	3.00000	76.1099	152.220	6.81435	1.44964
4	4.00000	80.9557	161.911	9.08580	1.93285
5	5.00000	85.2290	170.458	11.3572	2.41606
6	6.00000	89.1582	178.316	13.6287	2.89927
7	8.00000	96.4421	192.884	18.1716	3.86569
8	10.0000	103.305	206.611	22.7145	4.83212
9	15.0000	119.544	239.088	34.0718	7.24818
10	20.0000	135.038	270.076	45.4290	9.66423
11	25.0000	150.095	300.191	56.7863	12.0803
12	30.0000	164.875	329.751	68.1435	14.4964
13	40.0000	193.942	387.883	90.8580	19.3285
14	50.0000	222.636	445.271	113.573	24.1606

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	63.4688	126.938	3.40217	0.483212
1	1.50000	68.3840	136.768	5.10326	0.724818
2	2.00000	72.5223	145.045	6.80435	0.966423
3	3.00000	79.5021	159.004	10.2065	1.44964
4	4.00000	85.4786	170.957	13.6087	1.93285
5	5.00000	90.8826	181.765	17.0109	2.41606
6	6.00000	95.9425	191.885	20.4130	2.89927
7	8.00000	105.488	210.976	27.2174	3.86569
8	10.0000	114.613	229.225	34.0217	4.83212
9	15.0000	136.505	273.009	51.0326	7.24818
10	20.0000	157.652	315.305	68.0435	9.66423
11	25.0000	178.364	356.727	85.0544	12.0803
12	30.0000	198.797	397.594	102.065	14.4964
13	40.0000	239.171	478.341	136.087	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	63.9292	127.858	3.86261	0.483212
1	1.50000	69.0747	138.149	5.79391	0.724818
2	2.00000	73.4432	146.886	7.72522	0.966423
3	3.00000	80.8834	161.767	11.5878	1.44964
4	4.00000	87.3203	174.641	15.4504	1.93285
5	5.00000	93.1848	186.370	19.3130	2.41606
6	6.00000	98.7051	197.410	23.1756	2.89927
7	8.00000	109.171	218.343	30.9009	3.86569
8	10.0000	119.217	238.434	38.6261	4.83212
9	15.0000	143.411	286.822	57.9391	7.24818
10	20.0000	166.861	333.722	77.2522	9.66423
11	25.0000	189.874	379.749	96.5652	12.0803
12	30.0000	212.610	425.220	115.878	14.4964

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ŻTG	35.0000	ŻX	20.0000	GAMMA0	0.0180000
ŻL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	63.9292	127.858	3.86261	0.483212
1	1.50000	69.0747	138.149	5.79391	0.724818
2	2.00000	73.4432	146.886	7.72522	0.966423
3	3.00000	80.8834	161.767	11.5878	1.44964
4	4.00000	87.3203	174.641	15.4504	1.93285
5	5.00000	93.1848	186.370	19.3130	2.41606
6	6.00000	98.7051	197.410	23.1756	2.89927
7	8.00000	109.171	218.343	30.9009	3.86569
8	10.0000	119.217	238.434	38.6261	4.83212
9	15.0000	143.411	286.822	57.9391	7.24818
10	20.0000	166.861	333.722	77.2522	9.66423
11	25.0000	189.874	379.749	96.5652	12.0803
12	30.0000	212.610	425.220	115.878	14.4964

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	63.9292	127.858	3.86261	0.483212
1	1.50000	69.0747	138.149	5.79391	0.724818
2	2.00000	73.4432	146.886	7.72522	0.966423
3	3.00000	80.8834	161.767	11.5878	1.44964
4	4.00000	87.3203	174.641	15.4504	1.93285
5	5.00000	93.1848	186.370	19.3130	2.41606
6	6.00000	98.7051	197.410	23.1756	2.89927
7	8.00000	109.171	218.343	30.9009	3.86569
8	10.0000	119.217	238.434	38.6261	4.83212
9	15.0000	143.411	286.822	57.9391	7.24818
10	20.0000	166.861	333.722	77.2522	9.66423
11	25.0000	189.874	379.749	96.5652	12.0803
12	30.0000	212.610	425.220	115.878	14.4964

ZTG
35
150

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.01800
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.33330

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.1334	138.267	1.93178	0.483212
1	1.50000	75.0496	150.099	2.89766	0.724818
2	2.00000	80.0634	160.127	3.86355	0.966423
3	3.00000	88.3999	176.800	5.79533	1.44964
4	4.00000	95.3986	190.797	7.72710	1.93285
5	5.00000	101.575	203.150	9.65888	2.41606
6	6.00000	107.065	214.130	11.5907	2.89927
7	8.00000	116.152	232.304	15.4542	3.86569
8	10.0000	123.465	246.931	19.3178	4.83212
9	15.0000	139.140	278.281	28.9766	7.24818
10	20.0000	153.684	307.368	38.6355	9.66423
11	25.0000	167.614	335.228	48.2944	12.0803
12	30.0000	181.094	362.189	57.9533	14.4964
13	40.0000	207.182	414.365	77.2710	19.3285

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ℰTG	150.000	ℰX	20.0000	GAMMA0	0.0180000
ℰL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.1632	138.326	1.96148	0.483212
1	1.50000	75.0942	150.188	2.94222	0.724818
2	2.00000	80.1228	160.246	3.92296	0.966423
3	3.00000	88.4891	176.978	5.88443	1.44964
4	4.00000	95.5174	191.035	7.84591	1.93285
5	5.00000	101.723	203.447	9.80739	2.41606
6	6.00000	107.243	214.486	11.7689	2.89927
7	8.00000	116.390	232.779	15.6918	3.86569
8	10.0000	123.762	247.525	19.6148	4.83212
9	15.0000	139.586	279.172	29.4222	7.24818
10	20.0000	154.278	308.557	39.2296	9.66423
11	25.0000	168.357	336.713	49.0369	12.0803
12	30.0000	181.985	363.971	58.8443	14.4964
13	40.0000	208.371	416.741	78.4591	19.3285

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.4731	138.946	2.27145	0.483212
1	1.50000	75.5591	151.118	3.40718	0.724818
2	2.00000	80.7428	161.486	4.54290	0.966423
3	3.00000	89.4190	178.838	6.81435	1.44964
4	4.00000	96.7573	193.515	9.08580	1.93285
5	5.00000	103.273	206.546	11.3572	2.41606
6	6.00000	109.103	218.206	13.6287	2.89927
7	8.00000	118.870	237.739	18.1716	3.86569
8	10.0000	126.862	253.724	22.7145	4.83212
9	15.0000	144.236	288.471	34.0718	7.24818
10	20.0000	160.478	320.955	45.4290	9.66423
11	25.0000	176.106	352.212	56.7863	12.0803
12	30.0000	191.285	382.569	68.1435	14.4964
13	40.0000	220.769	441.539	90.8580	19.3285

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.6038	141.208	3.40217	0.483212
1	1.50000	77.2552	154.510	5.10326	0.724818
2	2.00000	83.0042	166.008	6.80435	0.966423
3	3.00000	92.8111	185.622	10.2065	1.44964
4	4.00000	101.280	202.560	13.6087	1.93285
5	5.00000	108.927	217.854	17.0109	2.41606
6	6.00000	115.887	231.775	20.4130	2.89927
7	8.00000	127.915	255.831	27.2174	3.86569
8	10.0000	138.169	276.339	34.0217	4.83212
9	15.0000	161.196	322.393	51.0326	7.24818
10	20.0000	183.092	366.184	68.0435	9.66423
11	25.0000	204.374	408.748	85.0544	12.0803

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.0643	142.129	3.86261	0.483212
1	1.50000	77.9459	155.892	5.79391	0.724818
2	2.00000	83.9251	167.850	7.72522	0.966423
3	3.00000	94.1924	188.385	11.5878	1.44964
4	4.00000	103.122	206.244	15.4504	1.93285
5	5.00000	111.229	222.458	19.3130	2.41606
6	6.00000	118.650	237.300	23.1756	2.89927
7	8.00000	131.599	263.198	30.9009	3.86569
8	10.0000	142.774	285.547	38.6261	4.83212
9	15.0000	168.103	336.206	57.9391	7.24818
10	20.0000	192.301	384.602	77.2522	9.66423
11	25.0000	215.885	431.770	96.5652	12.0803

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.0643	142.129	3.86261	0.483212
1	1.50000	77.9459	155.892	5.79391	0.724818
2	2.00000	83.9251	167.850	7.72522	0.966423
3	3.00000	94.1924	188.385	11.5878	1.44964
4	4.00000	103.122	206.244	15.4504	1.93285
5	5.00000	111.229	222.458	19.3130	2.41606
6	6.00000	118.650	237.300	23.1756	2.89927
7	8.00000	131.599	263.198	30.9009	3.86569
8	10.0000	142.774	285.547	38.6261	4.83212
9	15.0000	168.103	336.206	57.9391	7.24818
10	20.0000	192.301	384.602	77.2522	9.66423
11	25.0000	215.885	431.770	96.5652	12.0803

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ℨTG	150.000	ℨX	20.0000	GAMMA0	0.0180000
ℨL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.0643	142.129	3.86261	0.483212
1	1.50000	77.9459	155.892	5.79391	0.724818
2	2.00000	83.9251	167.850	7.72522	0.966423
3	3.00000	94.1924	188.385	11.5878	1.44964
4	4.00000	103.122	206.244	15.4504	1.93285
5	5.00000	111.229	222.458	19.3130	2.41606
6	6.00000	118.650	237.300	23.1756	2.89927
7	8.00000	131.599	263.198	30.9009	3.86569
8	10.0000	142.774	285.547	38.6261	4.83212
9	15.0000	168.103	336.206	57.9391	7.24818
10	20.0000	192.301	384.602	77.2522	9.66423
11	25.0000	215.885	431.770	96.5652	12.0803

ZTG

35

150

212

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947
ℰTG	212.000	ℰX	20.0000	GAMMA0	0.01
ℰL	50.0000	TEMP	60.0000	GAMMA1	-0.33

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.1703	138.341	1.93178	0.483212
1	1.50000	75.2123	150.425	2.89766	0.724818
2	2.00000	80.3457	160.691	3.86355	0.966423
3	3.00000	88.8591	177.718	5.79533	1.44964
4	4.00000	95.9606	191.921	7.72710	1.93285
5	5.00000	102.217	204.433	9.65888	2.41606
6	6.00000	107.790	215.580	11.5907	2.89927
7	8.00000	117.034	234.069	15.4542	3.86569
8	10.0000	124.431	248.862	19.3178	4.83212
9	15.0000	140.151	280.301	28.9766	7.24818
10	20.0000	154.707	309.415	38.6355	9.66423
11	25.0000	168.648	337.296	48.2944	12.0803
12	30.0000	182.136	364.273	57.9533	14.4964
13	40.0000	208.234	416.468	77.2710	19.3285

ZTG
35
150
212

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	212.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.1703	138.341	1.93178	0.483212
1	1.50000	75.2123	150.425	2.89766	0.724818
2	2.00000	80.3457	160.691	3.86355	0.966423
3	3.00000	88.8591	177.718	5.79533	1.44964
4	4.00000	95.9606	191.921	7.72710	1.93285
5	5.00000	102.217	204.433	9.65888	2.41606
6	6.00000	107.790	215.580	11.5907	2.89927
7	8.00000	117.034	234.069	15.4542	3.86569
8	10.0000	124.431	248.862	19.3178	4.83212
9	15.0000	140.151	280.301	28.9766	7.24818
10	20.0000	154.707	309.415	38.6355	9.66423
11	25.0000	168.648	337.296	48.2944	12.0803
12	30.0000	182.136	364.273	57.9533	14.4964
13	40.0000	208.234	416.468	77.2710	19.3285

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	212.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.2000	138.400	1.96148	0.483212
1	1.50000	75.2568	150.514	2.94222	0.724818
2	2.00000	80.4051	160.810	3.92296	0.966423
3	3.00000	88.9482	177.896	5.88443	1.44964
4	4.00000	96.0795	192.159	7.84591	1.93285
5	5.00000	102.365	204.730	9.80739	2.41606
6	6.00000	107.968	215.937	11.7689	2.89927
7	8.00000	117.272	234.544	15.6918	3.86569
8	10.0000	124.728	249.456	19.6148	4.83212
9	15.0000	140.596	281.192	29.4222	7.24818
10	20.0000	155.301	310.603	39.2296	9.66423
11	25.0000	169.390	338.781	49.0369	12.0803
12	30.0000	183.027	366.055	58.8443	14.4964
13	40.0000	209.422	418.844	78.4591	19.3285

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	212.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.5100	139.020	2.27145	0.483212
1	1.50000	75.7218	151.444	3.40718	0.724818
2	2.00000	81.0251	162.050	4.54290	0.966423
3	3.00000	89.8781	179.756	6.81435	1.44964
4	4.00000	97.3193	194.639	9.08580	1.93285
5	5.00000	103.915	207.830	11.3572	2.41606
6	6.00000	109.828	219.657	13.6287	2.89927
7	8.00000	119.752	239.504	18.1716	3.86569
8	10.0000	127.828	255.656	22.7145	4.83212
9	15.0000	145.246	290.492	34.0718	7.24818
10	20.0000	161.501	323.002	45.4290	9.66423
11	25.0000	177.140	354.279	56.7863	12.0803
12	30.0000	192.327	384.653	68.1435	14.4964
13	40.0000	221.821	443.642	90.8580	19.3285

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	212.000	ZX	20.0000	GAMMA0	0.0180000
ZL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.6407	141.281	3.40217	0.483212
1	1.50000	77.4179	154.836	5.10326	0.724818
2	2.00000	83.2865	166.573	6.80435	0.966423
3	3.00000	93.2703	186.541	10.2065	1.44964
4	4.00000	101.842	203.684	13.6087	1.93285
5	5.00000	109.569	219.137	17.0109	2.41606
6	6.00000	116.613	233.225	20.4130	2.89927
7	8.00000	128.798	257.595	27.2174	3.86569
8	10.0000	139.135	278.270	34.0217	4.83212
9	15.0000	162.207	324.413	51.0326	7.24818
10	20.0000	184.115	368.231	68.0435	9.66423
11	25.0000	205.408	410.816	85.0544	12.0803

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ℓTG	212.000	ℓX	20.0000	GAMMA0	0.0180000
ℓL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.1011	142.202	3.86261	0.483212
1	1.50000	78.1085	156.217	5.79391	0.724818
2	2.00000	84.2074	168.415	7.72522	0.966423
3	3.00000	94.6516	189.303	11.5878	1.44964
4	4.00000	103.684	207.368	15.4504	1.93285
5	5.00000	111.871	223.742	19.3130	2.41606
6	6.00000	119.375	238.750	23.1756	2.89927
7	8.00000	132.481	264.962	30.9009	3.86569
8	10.0000	143.739	287.479	38.6261	4.83212
9	15.0000	169.113	338.226	57.9391	7.24818
10	20.0000	193.324	386.648	77.2522	9.66423
11	25.0000	216.919	433.837	96.5652	12.0803

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ƵTG	212.000	ƵX	20.0000	GAMMA0	0.0180000
ƵL	50.0000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.1011	142.202	3.86261	0.483212
1	1.50000	78.1085	156.217	5.79391	0.724818
2	2.00000	84.2074	168.415	7.72522	0.966423
3	3.00000	94.6516	189.303	11.5878	1.44964
4	4.00000	103.684	207.368	15.4504	1.93285
5	5.00000	111.871	223.742	19.3130	2.41606
6	6.00000	119.375	238.750	23.1756	2.89927
7	8.00000	132.481	264.962	30.9009	3.86569
8	10.0000	143.739	287.479	38.6261	4.83212
9	15.0000	169.113	338.226	57.9391	7.24818
10	20.0000	193.324	386.648	77.2522	9.66423
11	25.0000	216.919	433.837	96.5652	12.0803

ZTG
ZL 50
35
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35
ZL 100

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.
ZTG	35.0000	ZX	20.0000	GAMMA0	0.01
ZL	100.000	TEMP	60.0000	GAMMA1	-0.33

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.4187	122.837	1.36589	0.483212
1	1.50000	64.1889	128.378	2.04884	0.724818
2	2.00000	66.4197	132.839	2.73179	0.966423
3	3.00000	70.1020	140.204	4.09768	1.44964
4	4.00000	73.2483	146.497	5.46358	1.93285
5	5.00000	76.1051	152.210	6.82947	2.41606
6	6.00000	78.7807	157.561	8.19537	2.89927
7	8.00000	83.7931	167.586	10.9272	3.86569
8	10.0000	88.5225	177.045	13.6589	4.83212
9	15.0000	99.6794	199.359	20.4884	7.24818
10	20.0000	110.321	220.642	27.3179	9.66423
11	25.0000	120.679	241.359	34.1474	12.0803
12	30.0000	130.858	261.716	40.9768	14.4964
13	40.0000	150.874	301.747	54.6358	19.3285
14	50.0000	170.599	341.198	68.2947	24.1606
15	60.0000	190.137	380.274	81.9537	28.9927

ZTG 35 150 2½ 35

ZL 50

ZL 100

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.4187	122.837	1.36589	0.483212
1	1.50000	64.1889	128.378	2.04884	0.724818
2	2.00000	66.4197	132.839	2.73179	0.966423
3	3.00000	70.1020	140.204	4.09768	1.44964
4	4.00000	73.2483	146.497	5.46358	1.93285
5	5.00000	76.1051	152.210	6.82947	2.41606
6	6.00000	78.7807	157.561	8.19537	2.89927
7	8.00000	83.7931	167.586	10.9272	3.86569
8	10.0000	88.5225	177.045	13.6589	4.83212
9	15.0000	99.6794	199.359	20.4884	7.24818
10	20.0000	110.321	220.642	27.3179	9.66423
11	25.0000	120.679	241.359	34.1474	12.0803
12	30.0000	130.858	261.716	40.9768	14.4964
13	40.0000	150.874	301.747	54.6358	19.3285
14	50.0000	170.599	341.198	68.2947	24.1606
15	60.0000	190.137	380.274	81.9537	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.4397	122.879	1.38690	0.483212
1	1.50000	64.2204	128.441	2.08034	0.724818
2	2.00000	66.4617	132.923	2.77379	0.966423
3	3.00000	70.1650	140.330	4.16069	1.44964
4	4.00000	73.3323	146.665	5.54759	1.93285
5	5.00000	76.2101	152.420	6.93448	2.41606
6	6.00000	78.9067	157.813	8.32138	2.89927
7	8.00000	83.9611	167.922	11.0952	3.86569
8	10.0000	88.7326	177.465	13.8690	4.83212
9	15.0000	99.9945	199.989	20.8034	7.24818
10	20.0000	110.741	221.482	27.7379	9.66423
11	25.0000	121.204	242.409	34.6724	12.0803
12	30.0000	131.488	262.976	41.6069	14.4964
13	40.0000	151.714	303.427	55.4759	19.3285
14	50.0000	171.649	343.298	69.3448	24.1606
15	60.0000	191.397	382.794	83.2138	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.6589	123.318	1.60607	0.485212
1	1.50000	64.5491	129.098	2.40910	0.724818
2	2.00000	66.9001	133.800	3.21213	0.966423
3	3.00000	70.8225	141.645	4.81820	1.44964
4	4.00000	74.2090	148.418	6.42427	1.93285
5	5.00000	77.3060	154.612	8.03034	2.41606
6	6.00000	80.2217	160.443	9.63640	2.89927
7	8.00000	85.7145	171.429	12.8485	3.86569
8	10.0000	90.9243	181.849	16.0607	4.83212
9	15.0000	103.282	206.564	24.0910	7.24818
10	20.0000	115.124	230.249	32.1213	9.66423
11	25.0000	126.684	253.367	40.1517	12.0803
12	30.0000	138.063	276.126	48.1820	14.4964
13	40.0000	160.480	320.961	64.2427	19.3285
14	50.0000	182.607	365.215	80.3034	24.1606
15	60.0000	204.547	409.095	96.3640	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMAO	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.4584	124.917	2.40557	0.483212
1	1.50000	65.7484	131.497	3.60835	0.724818
2	2.00000	68.4991	136.998	4.81113	0.966423
3	3.00000	73.2210	146.442	7.21670	1.44964
4	4.00000	77.4070	154.814	9.62226	1.93285
5	5.00000	81.3034	162.607	12.0278	2.41606
6	6.00000	85.0187	170.037	14.4334	2.89927
7	8.00000	92.1105	184.221	19.2445	3.86569
8	10.0000	98.9192	197.838	24.0557	4.83212
9	15.0000	115.275	230.549	36.0835	7.24818
10	20.0000	131.114	262.229	48.1113	9.66423
11	25.0000	146.671	293.342	60.1391	12.0803
12	30.0000	162.048	324.096	72.1670	14.4964
13	40.0000	192.460	384.921	96.2226	19.3285
14	50.0000	222.582	445.165	120.278	24.1606

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.7840	125.568	2.73112	0.483212
1	1.50000	66.2367	132.473	4.09668	0.724818
2	2.00000	69.1502	138.300	5.46225	0.966423
3	3.00000	74.1977	148.395	8.19337	1.44964
4	4.00000	78.7092	157.418	10.9245	1.93285
5	5.00000	82.9312	165.862	13.6556	2.41606
6	6.00000	86.9721	173.944	16.3867	2.89927
7	8.00000	94.7149	189.430	21.8490	3.86569
8	10.0000	102.175	204.350	27.3112	4.83212
9	15.0000	120.158	240.316	40.9668	7.24818
10	20.0000	137.626	275.251	54.6225	9.66423
11	25.0000	154.810	309.620	68.2781	12.0803
12	30.0000	171.815	343.630	81.9337	14.4964
13	40.0000	205.483	410.965	109.245	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.7840	125.568	2.73112	0.483212
1	1.50000	66.2367	132.473	4.09668	0.724818
2	2.00000	69.1502	138.300	5.46225	0.966423
3	3.00000	74.1977	148.395	8.19337	1.44964
4	4.00000	78.7092	157.418	10.9245	1.93285
5	5.00000	82.9312	165.862	13.6556	2.41606
6	6.00000	86.9721	173.944	16.3867	2.89927
7	8.00000	94.7149	189.430	21.8490	3.86569
8	10.0000	102.175	204.350	27.3112	4.83212
9	15.0000	120.158	240.316	40.9668	7.24818
10	20.0000	137.626	275.251	54.6225	9.66423
11	25.0000	154.810	309.620	68.2781	12.0803
12	30.0000	171.815	343.630	81.9337	14.4964
13	40.0000	205.483	410.965	109.245	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.7840	125.568	2.73112	0.483212
1	1.50000	66.2367	132.473	4.09668	0.724818
2	2.00000	69.1502	138.300	5.46225	0.966423
3	3.00000	74.1977	148.395	8.19337	1.44964
4	4.00000	78.7092	157.418	10.9245	1.93285
5	5.00000	82.9312	165.862	13.6556	2.41606
6	6.00000	86.9721	173.944	16.3867	2.89927
7	8.00000	94.7149	189.430	21.8490	3.86569
8	10.0000	102.175	204.350	27.3112	4.83212
9	15.0000	120.158	240.316	40.9668	7.24818
10	20.0000	137.626	275.251	54.6225	9.66423
11	25.0000	154.810	309.620	68.2781	12.0803
12	30.0000	171.815	343.630	81.9337	14.4964
13	40.0000	205.483	410.965	109.245	19.3285

ZTG 35 150 212 35 100

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	68.3831	136.766	1.36589	0.483212
1	1.50000	72.1458	144.292	2.04884	0.724818
2	2.00000	75.0612	150.122	2.73179	0.966423
3	3.00000	79.5074	159.015	4.09768	1.44964
4	4.00000	82.9998	166.000	5.46358	1.93285
5	5.00000	86.0339	172.068	6.82947	2.41606
6	6.00000	88.8184	177.637	8.19537	2.89927
7	8.00000	93.9724	187.945	10.9272	3.86569
8	10.0000	98.8035	197.607	13.6589	4.83212
9	15.0000	110.146	220.293	20.4884	7.24818
10	20.0000	120.928	241.856	27.3179	9.66423
11	25.0000	131.402	262.805	34.1474	12.0803
12	30.0000	141.683	283.365	40.9768	14.4964
13	40.0000	161.876	323.751	54.6358	19.3285
14	50.0000	181.762	363.524	68.2947	24.1606
15	60.0000	201.457	402.913	81.9537	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
℄TG	100.000	℄X	20.0000	GAMMA0	0.0180000
℄L	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	68.4041	136.808	1.38690	0.483212
1	1.50000	72.1773	144.355	2.08034	0.724818
2	2.00000	75.1032	150.206	2.77379	0.966423
3	3.00000	79.5704	159.141	4.16069	1.44964
4	4.00000	83.0838	166.168	5.54759	1.93285
5	5.00000	86.1389	172.278	6.93448	2.41606
6	6.00000	88.9444	177.889	8.32138	2.89927
7	8.00000	94.1404	188.281	11.0952	3.86569
8	10.0000	99.0135	198.027	13.8690	4.83212
9	15.0000	110.461	220.923	20.8034	7.24818
10	20.0000	121.348	242.696	27.7379	9.66423
11	25.0000	131.928	263.855	34.6724	12.0803
12	30.0000	142.313	284.625	41.6069	14.4964
13	40.0000	162.716	325.431	55.4759	19.3285
14	50.0000	182.812	365.624	69.3448	24.1606
15	60.0000	202.717	405.433	83.2138	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	68.6233	137.247	1.60607	0.483212
1	1.50000	72.5061	145.012	2.40910	0.724818
2	2.00000	75.5416	151.083	3.21213	0.966423
3	3.00000	80.2279	160.456	4.81820	1.44964
4	4.00000	83.9605	167.921	6.42427	1.93285
5	5.00000	87.2348	174.470	8.03034	2.41606
6	6.00000	90.2594	180.519	9.63640	2.89927
7	8.00000	95.8938	191.788	12.8485	3.86569
8	10.0000	101.205	202.410	16.0607	4.83212
9	15.0000	113.749	227.498	24.0910	7.24818
10	20.0000	125.731	251.463	32.1213	9.66423
11	25.0000	137.407	274.814	40.1517	12.0803
12	30.0000	148.888	297.776	48.1820	14.4964
13	40.0000	171.483	342.965	64.2427	19.3285
14	50.0000	193.771	387.541	80.3034	24.1606
15	60.0000	215.867	431.734	96.3640	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ℓTG	100.000	ℓX	20.0000	GAMMA0	0.0180000
ℓL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.4228	138.846	2.40557	0.483212
1	1.50000	73.7053	147.411	3.60835	0.724818
2	2.00000	77.1406	154.281	4.81113	0.966423
3	3.00000	82.6264	165.253	7.21670	1.44964
4	4.00000	87.1585	174.317	9.62226	1.93285
5	5.00000	91.2323	182.465	12.0278	2.41606
6	6.00000	95.0564	190.113	14.4334	2.89927
7	8.00000	102.290	204.580	19.2445	3.86569
8	10.0000	109.200	218.400	24.0557	4.83212
9	15.0000	125.741	251.483	36.0835	7.24818
10	20.0000	141.721	283.443	48.1113	9.66423
11	25.0000	157.394	314.789	60.1391	12.0803
12	30.0000	172.873	345.746	72.1670	14.4964
13	40.0000	203.462	406.925	96.2226	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.7483	139.497	2.73112	0.483212
1	1.50000	74.1936	148.387	4.09668	0.724818
2	2.00000	77.7917	155.583	5.46225	0.966423
3	3.00000	83.6031	167.206	8.19337	1.44964
4	4.00000	88.4607	176.921	10.9245	1.93285
5	5.00000	92.8601	185.720	13.6556	2.41606
6	6.00000	97.0098	194.020	16.3867	2.89927
7	8.00000	104.894	209.788	21.8490	3.86569
8	10.0000	112.456	224.912	27.3112	4.83212
9	15.0000	130.625	261.250	40.9668	7.24818
10	20.0000	148.232	296.465	54.6225	9.66423
11	25.0000	165.533	331.066	68.2781	12.0803
12	30.0000	182.639	365.279	81.9337	14.4964
13	40.0000	216.485	432.970	109.245	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
℄TG	100.000	℄X	20.0000	GAMMA0	0.0180000
℄L	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.7483	139.497	2.73112	0.485212
1	1.50000	74.1936	148.387	4.09668	0.724818
2	2.00000	77.7917	155.583	5.46225	0.966423
3	3.00000	83.6031	167.206	8.19337	1.44964
4	4.00000	88.4607	176.921	10.9245	1.93285
5	5.00000	92.8601	185.720	13.6556	2.41606
6	6.00000	97.0098	194.020	16.3867	2.89927
7	8.00000	104.894	209.788	21.8490	3.86569
8	10.0000	112.456	224.912	27.3112	4.83212
9	15.0000	130.625	261.250	40.9668	7.24818
10	20.0000	148.232	296.465	54.6225	9.66423
11	25.0000	165.533	331.066	68.2781	12.0803
12	30.0000	182.639	365.279	81.9337	14.4964
13	40.0000	216.485	432.970	109.245	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.7483	139.497	2.73112	0.483212
1	1.50000	74.1936	148.387	4.09668	0.724818
2	2.00000	77.7917	155.583	5.46225	0.966423
3	3.00000	83.6031	167.206	8.19337	1.44964
4	4.00000	88.4607	176.921	10.9245	1.93285
5	5.00000	92.8601	185.720	13.6556	2.41606
6	6.00000	97.0098	194.020	16.3867	2.89927
7	8.00000	104.894	209.788	21.8490	3.86569
8	10.0000	112.456	224.912	27.3112	4.83212
9	15.0000	130.625	261.250	40.9668	7.24818
10	20.0000	148.232	296.465	54.6225	9.66423
11	25.0000	165.533	331.066	68.2781	12.0803
12	30.0000	182.639	365.279	81.9337	14.4964
13	40.0000	216.485	432.970	109.245	19.3285

ZTG

35

150

212

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

35

100

200

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	75.4110	150.822	1.36589	0.483212
1	1.50000	80.0128	160.026	2.04884	0.724818
2	2.00000	83.6475	167.295	2.73179	0.966423
3	3.00000	89.0761	178.152	4.09768	1.44964
4	4.00000	93.0459	186.092	5.46358	1.93285
5	5.00000	96.2899	192.580	6.82947	2.41606
6	6.00000	99.1709	198.342	8.19537	2.89927
7	8.00000	104.407	208.815	10.9272	3.86569
8	10.0000	109.278	218.557	13.6589	4.83212
9	15.0000	120.677	241.354	20.4884	7.24818
10	20.0000	131.491	262.981	27.3179	9.66423
11	25.0000	141.988	283.975	34.1474	12.0803
12	30.0000	152.284	304.568	40.9768	14.4964
13	40.0000	172.499	344.998	54.6358	19.3285
14	50.0000	192.398	384.796	68.2947	24.1606
15	60.0000	212.101	424.203	81.9537	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ŽTG	200.000	ŽX	20.0000	GAMMA0	0.0180000
ŽL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	75.4320	150.864	1.38690	0.483212
1	1.50000	80.0443	160.089	2.08034	0.724818
2	2.00000	83.6895	167.379	2.77379	0.966423
3	3.00000	89.1391	178.278	4.16069	1.44964
4	4.00000	93.1299	186.260	5.54759	1.93285
5	5.00000	96.3949	192.790	6.93448	2.41606
6	6.00000	99.2969	198.594	8.32138	2.89927
7	8.00000	104.575	209.151	11.0952	3.86569
8	10.0000	109.488	218.977	13.8690	4.83212
9	15.0000	120.992	241.984	20.8034	7.24818
10	20.0000	131.911	263.821	27.7379	9.66423
11	25.0000	142.513	285.025	34.6724	12.0803
12	30.0000	152.914	305.828	41.6069	14.4964
13	40.0000	173.339	346.678	55.4759	19.3285
14	50.0000	193.448	386.897	69.3448	24.1606
15	60.0000	213.362	426.723	83.2138	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	75.6512	151.302	1.60607	0.483212
1	1.50000	80.3731	160.746	2.40910	0.724818
2	2.00000	84.1278	168.256	3.21213	0.966423
3	3.00000	89.7966	179.593	4.81820	1.44964
4	4.00000	94.0066	188.013	6.42427	1.93285
5	5.00000	97.4907	194.981	8.03034	2.41606
6	6.00000	100.612	201.224	9.63640	2.89927
7	8.00000	106.329	212.657	12.8485	3.86569
8	10.0000	111.680	223.360	16.0607	4.83212
9	15.0000	124.279	248.559	24.0910	7.24818
10	20.0000	136.294	272.588	32.1213	9.66423
11	25.0000	147.992	295.984	40.1517	12.0803
12	30.0000	159.489	318.979	48.1820	14.4964
13	40.0000	182.106	364.211	64.2427	19.3285
14	50.0000	204.407	408.814	80.3034	24.1606

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	76.4507	152.901	2.40557	0.483212
1	1.50000	81.5723	163.145	3.60835	0.724818
2	2.00000	85.7268	171.454	4.81113	0.966423
3	3.00000	92.1951	184.390	7.21670	1.44964
4	4.00000	97.2046	194.409	9.62226	1.93285
5	5.00000	101.488	202.976	12.0278	2.41606
6	6.00000	105.409	210.818	14.4334	2.89927
7	8.00000	112.725	225.449	19.2445	3.86569
8	10.0000	119.675	239.350	24.0557	4.83212
9	15.0000	136.272	272.544	36.0835	7.24818
10	20.0000	152.284	304.568	48.1113	9.66423
11	25.0000	167.979	335.959	60.1391	12.0803
12	30.0000	183.474	366.949	72.1670	14.4964
13	40.0000	214.086	428.171	96.2226	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	76.7762	153.552	2.73112	0.483212
1	1.50000	82.0606	164.121	4.09668	0.724818
2	2.00000	86.3779	172.756	5.46225	0.966423
3	3.00000	93.1718	186.344	8.19337	1.44964
4	4.00000	98.5068	197.014	10.9245	1.93285
5	5.00000	103.116	206.232	13.6556	2.41606
6	6.00000	107.362	214.724	16.3867	2.89927
7	8.00000	115.329	230.658	21.8490	3.86569
8	10.0000	122.931	245.861	27.3112	4.83212
9	15.0000	141.155	282.310	40.9668	7.24818
10	20.0000	158.795	317.590	54.6225	9.66423
11	25.0000	176.118	352.237	68.2781	12.0803
12	30.0000	193.241	386.482	81.9337	14.4964
13	40.0000	227.108	454.216	109.245	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	76.7762	153.552	2.73112	0.483212
1	1.50000	82.0606	164.121	4.09668	0.724818
2	2.00000	86.3779	172.756	5.46225	0.966423
3	3.00000	93.1718	186.344	8.19337	1.44964
4	4.00000	98.5068	197.014	10.9245	1.93285
5	5.00000	103.116	206.232	13.6556	2.41606
6	6.00000	107.362	214.724	16.3867	2.89927
7	8.00000	115.329	230.658	21.8490	3.86569
8	10.0000	122.931	245.861	27.3112	4.83212
9	15.0000	141.155	282.310	40.9668	7.24818
10	20.0000	158.795	317.590	54.6225	9.66423
11	25.0000	176.118	352.237	68.2781	12.0803
12	30.0000	193.241	386.482	81.9337	14.4964
13	40.0000	227.108	454.216	109.245	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	76.7762	153.552	2.73112	0.483212
1	1.50000	82.0606	164.121	4.09668	0.724818
2	2.00000	86.3779	172.756	5.46225	0.966423
3	3.00000	93.1718	186.344	8.19337	1.44964
4	4.00000	98.5068	197.014	10.9245	1.93285
5	5.00000	103.116	206.232	13.6556	2.41606
6	6.00000	107.362	214.724	16.3867	2.89927
7	8.00000	115.329	230.658	21.8490	3.86569
8	10.0000	122.931	245.861	27.3112	4.83212
9	15.0000	141.155	282.310	40.9668	7.24818
10	20.0000	158.795	317.590	54.6225	9.66423
11	25.0000	176.118	352.237	68.2781	12.0803
12	30.0000	193.241	386.482	81.9337	14.4964
13	40.0000	227.108	454.216	109.245	19.3285

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	75.8158	151.632	1.36589	0.483212
1	1.50000	80.6626	161.325	2.04884	0.724818
2	2.00000	84.5103	169.021	2.73179	0.966423
3	3.00000	90.2648	180.530	4.09768	1.44964
4	4.00000	94.4101	188.820	5.46358	1.93285
5	5.00000	97.7306	195.461	6.82947	2.41606
6	6.00000	100.643	201.286	8.19537	2.89927
7	8.00000	105.900	211.800	10.9272	3.86569
8	10.0000	110.778	221.555	13.6589	4.83212
9	15.0000	122.182	244.365	20.4884	7.24818
10	20.0000	132.999	265.998	27.3179	9.66423
11	25.0000	143.497	286.995	34.1474	12.0803
12	30.0000	153.795	307.590	40.9768	14.4964
13	40.0000	174.011	348.022	54.6358	19.3285
14	50.0000	193.911	387.822	68.2947	24.1606
15	60.0000	213.615	427.230	81.9537	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	75.8368	151.674	1.38690	0.483212
1	1.50000	80.6941	161.388	2.08034	0.724818
2	2.00000	84.5523	169.105	2.77379	0.966423
3	3.00000	90.3278	180.656	4.16069	1.44964
4	4.00000	94.4941	188.988	5.54759	1.93285
5	5.00000	97.8356	195.671	6.93448	2.41606
6	6.00000	100.769	201.538	8.32138	2.89927
7	8.00000	106.068	212.136	11.0952	3.86569
8	10.0000	110.988	221.976	13.8690	4.83212
9	15.0000	122.497	244.995	20.8034	7.24818
10	20.0000	133.419	266.838	27.7379	9.66423
11	25.0000	144.022	288.045	34.6724	12.0803
12	30.0000	154.425	308.850	41.6069	14.4964
13	40.0000	174.851	349.702	55.4759	19.3285
14	50.0000	194.961	389.922	69.3448	24.1606
15	60.0000	214.875	429.750	83.2138	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	76.0560	152.112	1.60607	0.483212
1	1.50000	81.0228	162.046	2.40910	0.724818
2	2.00000	84.9906	169.981	3.21213	0.966423
3	3.00000	90.9854	181.971	4.81820	1.44964
4	4.00000	95.3707	190.741	6.42427	1.93285
5	5.00000	98.9315	197.863	8.03034	2.41606
6	6.00000	102.084	204.169	9.63640	2.89927
7	8.00000	107.822	215.643	12.8485	3.86569
8	10.0000	113.179	226.359	16.0607	4.83212
9	15.0000	125.785	251.570	24.0910	7.24818
10	20.0000	137.802	275.605	32.1213	9.66423
11	25.0000	149.502	299.003	40.1517	12.0803
12	30.0000	161.000	322.000	48.1820	14.4964
13	40.0000	183.618	367.236	64.2427	19.3285
14	50.0000	205.920	411.840	80.3034	24.1606

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ETG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	76.8555	153.711	2.40557	0.483212
1	1.50000	82.2221	164.444	3.60835	0.724818
2	2.00000	86.5896	173.179	4.81113	0.966423
3	3.00000	93.3839	186.768	7.21670	1.44964
4	4.00000	98.5687	197.137	9.62226	1.93285
5	5.00000	102.929	205.858	12.0278	2.41606
6	6.00000	106.881	213.763	14.4334	2.89927
7	8.00000	114.218	228.435	19.2445	3.86569
8	10.0000	121.174	242.349	24.0557	4.83212
9	15.0000	137.777	275.555	36.0835	7.24818
10	20.0000	153.792	307.584	48.1113	9.66423
11	25.0000	169.489	338.978	60.1391	12.0803
12	30.0000	184.985	369.970	72.1670	14.4964
13	40.0000	215.598	431.196	96.2226	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	77.1810	154.362	2.73112	0.483212
1	1.50000	82.7104	165.421	4.09668	0.724818
2	2.00000	87.2408	174.482	5.46225	0.966423
3	3.00000	94.3605	188.721	8.19337	1.44964
4	4.00000	99.8710	199.742	10.9245	1.93285
5	5.00000	104.557	209.114	13.6556	2.41606
6	6.00000	108.835	217.669	16.3867	2.89927
7	8.00000	116.822	233.644	21.8490	3.86569
8	10.0000	124.430	248.860	27.3112	4.83212
9	15.0000	142.661	285.321	40.9668	7.24818
10	20.0000	160.303	320.607	54.6225	9.66423
11	25.0000	177.628	355.256	68.2781	12.0803
12	30.0000	194.752	389.504	81.9337	14.4964
13	40.0000	228.620	457.240	109.245	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	77.1810	154.362	2.73112	0.483212
1	1.50000	82.7104	165.421	4.09668	0.724818
2	2.00000	87.2408	174.482	5.46225	0.966423
3	3.00000	94.3605	188.721	8.19337	1.44964
4	4.00000	99.8710	199.742	10.9245	1.93285
5	5.00000	104.557	209.114	13.6556	2.41606
6	6.00000	108.835	217.669	16.3867	2.89927
7	8.00000	116.822	233.644	21.8490	3.86569
8	10.0000	124.430	248.860	27.3112	4.83212
9	15.0000	142.661	285.321	40.9668	7.24818
10	20.0000	160.303	320.607	54.6225	9.66423
11	25.0000	177.628	355.256	68.2781	12.0803
12	30.0000	194.752	389.504	81.9337	14.4964
13	40.0000	228.620	457.240	109.245	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	100.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	77.1810	154.362	2.73112	0.483212
1	1.50000	82.7104	165.421	4.09668	0.724818
2	2.00000	87.2408	174.482	5.46225	0.966423
3	3.00000	94.3605	188.721	8.19337	1.44964
4	4.00000	99.8710	199.742	10.9245	1.93285
5	5.00000	104.557	209.114	13.6556	2.41606
6	6.00000	108.835	217.669	16.3867	2.89927
7	8.00000	116.822	233.644	21.8490	3.86569
8	10.0000	124.430	248.860	27.3112	4.83212
9	15.0000	142.661	285.321	40.9668	7.24818
10	20.0000	160.303	320.607	54.6225	9.66423
11	25.0000	177.628	355.256	68.2781	12.0803
12	30.0000	194.752	389.504	81.9337	14.4964
13	40.0000	228.620	457.240	109.245	19.3285

ZTG

ZL 50 — 35 150 212

ZL 100 — 35 100 200 300

ZL 150 — 35

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.8957	119.791	1.11520	0.483212
1	1.50000	62.6174	125.235	1.67279	0.724818
2	2.00000	64.7795	129.559	2.23039	0.966423
3	3.00000	68.2762	136.552	3.34559	1.44964
4	4.00000	71.1963	142.393	4.46079	1.93285
5	5.00000	73.8053	147.611	5.57598	2.41606
6	6.00000	76.2221	152.444	6.69118	2.89927
7	8.00000	80.7027	161.405	8.92157	3.86569
8	10.0000	84.8939	169.788	11.1520	4.83212
9	15.0000	94.7003	189.401	16.7279	7.24818
10	20.0000	103.991	207.982	22.3039	9.66423
11	25.0000	112.999	225.999	27.8799	12.0803
12	30.0000	121.829	243.658	33.4559	14.4964
13	40.0000	139.151	278.302	44.6079	19.3285
14	50.0000	156.188	312.376	55.7598	24.1606
15	60.0000	173.045	346.090	66.9118	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ℰTG	35.0000	ℰX	20.0000	GAMMA0	0.0180000
ℰL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.9128	119.826	1.13234	0.483212
1	1.50000	62.6431	125.286	1.69852	0.724818
2	2.00000	64.8138	129.628	2.26469	0.966423
3	3.00000	68.3277	136.655	3.39703	1.44964
4	4.00000	71.2649	142.530	4.52937	1.93285
5	5.00000	73.8911	147.782	5.66172	2.41606
6	6.00000	76.3250	152.650	6.79406	2.89927
7	8.00000	80.8399	161.680	9.05875	3.86569
8	10.0000	85.0654	170.131	11.3234	4.83212
9	15.0000	94.9575	189.915	16.9852	7.24818
10	20.0000	104.334	208.668	22.6469	9.66423
11	25.0000	113.428	226.856	28.3086	12.0803
12	30.0000	122.344	244.687	33.9703	14.4964
13	40.0000	139.837	279.673	45.2937	19.3285
14	50.0000	157.046	314.091	56.6172	24.1606
15	60.0000	174.074	348.148	67.9406	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	60.0918	120.184	1.31129	0.483212
1	1.50000	62.9116	125.823	1.96693	0.724818
2	2.00000	65.1717	130.343	2.62258	0.966423
3	3.00000	68.8645	137.729	3.93386	1.44964
4	4.00000	71.9807	143.961	5.24515	1.93285
5	5.00000	74.7858	149.572	6.55644	2.41606
6	6.00000	77.3986	154.797	7.86773	2.89927
7	8.00000	82.2715	164.543	10.4903	3.86569
8	10.0000	86.8548	173.710	13.1129	4.83212
9	15.0000	97.6417	195.283	19.6693	7.24818
10	20.0000	107.913	215.826	26.2258	9.66423
11	25.0000	117.902	235.804	32.7822	12.0803
12	30.0000	127.712	255.424	39.3386	14.4964
13	40.0000	146.994	293.989	52.4515	19.3285
14	50.0000	165.993	331.986	65.5644	24.1606
15	60.0000	184.811	369.621	78.6773	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	60.7445	121.489	1.96404	0.483212
1	1.50000	63.8907	127.781	2.94607	0.724818
2	2.00000	66.4772	132.954	3.92809	0.966423
3	3.00000	70.8228	141.646	5.89213	1.44964
4	4.00000	74.5917	149.183	7.85618	1.93285
5	5.00000	78.0496	156.099	9.82022	2.41606
6	6.00000	81.3152	162.630	11.7843	2.89927
7	8.00000	87.4935	174.987	15.7124	3.86569
8	10.0000	93.3824	186.765	19.6404	4.83212
9	15.0000	107.433	214.866	29.4607	7.24818
10	20.0000	120.968	241.936	39.2809	9.66423
11	25.0000	134.221	268.441	49.1011	12.0803
12	30.0000	147.295	294.589	58.9213	14.4964
13	40.0000	173.105	346.209	78.5618	19.3285
14	50.0000	198.631	397.261	98.2022	24.1606
15	60.0000	223.976	447.952	117.843	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ETG	35.0000	EX	20.0000	GAMMA0	0.0180000
EL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.0103	122.021	2.22985	0.483212
1	1.50000	64.2894	128.579	3.34477	0.724818
2	2.00000	67.0088	134.018	4.45970	0.966423
3	3.00000	71.6202	143.240	6.68955	1.44964
4	4.00000	75.6550	151.310	8.91939	1.93285
5	5.00000	79.3786	158.757	11.1492	2.41606
6	6.00000	82.9100	165.820	13.3791	2.89927
7	8.00000	89.6199	179.240	17.8388	3.86569
8	10.0000	96.0404	192.081	22.2985	4.83212
9	15.0000	111.420	222.840	33.4477	7.24818
10	20.0000	126.284	252.568	44.5970	9.66423
11	25.0000	140.866	281.732	55.7462	12.0803
12	30.0000	155.269	310.537	66.8955	14.4964
13	40.0000	183.737	367.474	89.1939	19.3285
14	50.0000	211.921	423.842	111.492	24.1606

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.0103	122.021	2.22985	0.483212
1	1.50000	64.2894	128.579	3.34477	0.724818
2	2.00000	67.0088	134.018	4.45970	0.966423
3	3.00000	71.6202	143.240	6.68955	1.44964
4	4.00000	75.6550	151.310	8.91939	1.93285
5	5.00000	79.3786	158.757	11.1492	2.41606
6	6.00000	82.9100	165.820	13.3791	2.89927
7	8.00000	89.6199	179.240	17.8388	3.86569
8	10.0000	96.0404	192.081	22.2985	4.83212
9	15.0000	111.420	222.840	33.4477	7.24818
10	20.0000	126.284	252.568	44.5970	9.66423
11	25.0000	140.866	281.732	55.7462	12.0803
12	30.0000	155.269	310.537	66.8955	14.4964
13	40.0000	183.737	367.474	89.1939	19.3285
14	50.0000	211.921	423.842	111.492	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	61.0103	122.021	2.22985	0.483212
1	1.50000	64.2894	128.579	3.34477	0.724818
2	2.00000	67.0088	134.018	4.45970	0.966423
3	3.00000	71.6202	143.240	6.68955	1.44964
4	4.00000	75.6550	151.310	8.91939	1.93285
5	5.00000	79.3786	158.757	11.1492	2.41606
6	6.00000	82.9100	165.820	13.3791	2.89927
7	8.00000	89.6199	179.240	17.8388	3.86569
8	10.0000	96.0404	192.081	22.2985	4.83212
9	15.0000	111.420	222.840	33.4477	7.24818
10	20.0000	126.284	252.568	44.5970	9.66423
11	25.0000	140.866	281.732	55.7462	12.0803
12	30.0000	155.269	310.537	66.8955	14.4964
13	40.0000	183.737	367.474	89.1939	19.3285
14	50.0000	211.921	423.842	111.492	24.1606

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	64.5218	129.044	1.11520	0.483212
1	1.50000	68.5658	137.132	1.67279	0.724818
2	2.00000	71.9856	143.971	2.23039	0.966423
3	3.00000	77.7832	155.566	3.34559	1.44964
4	4.00000	82.7053	165.411	4.46079	1.93285
5	5.00000	87.0313	174.063	5.57598	2.41606
6	6.00000	90.9138	181.828	6.69118	2.89927
7	8.00000	97.7305	195.461	8.92157	3.86569
8	10.0000	103.690	207.380	11.1520	4.83212
9	15.0000	116.517	233.033	16.7279	7.24818
10	20.0000	127.776	255.553	22.3039	9.66423
11	25.0000	138.204	276.409	27.8799	12.0803
12	30.0000	148.120	296.239	33.4559	14.4964
13	40.0000	167.041	334.082	44.6079	19.3285
14	50.0000	185.286	370.571	55.7598	24.1606
15	60.0000	203.150	406.299	66.9118	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	64.5390	129.078	1.13234	0.483212
1	1.50000	68.5916	137.183	1.69852	0.724818
2	2.00000	72.0198	144.040	2.26469	0.966423
3	3.00000	77.8347	155.669	3.39703	1.44964
4	4.00000	82.7739	165.548	4.52937	1.93285
5	5.00000	87.1170	174.234	5.66172	2.41606
6	6.00000	91.0167	182.033	6.79406	2.89927
7	8.00000	97.8676	195.735	9.05875	3.86569
8	10.0000	103.861	207.723	11.3234	4.83212
9	15.0000	116.774	233.547	16.9852	7.24818
10	20.0000	128.119	256.239	22.6469	9.66423
11	25.0000	138.633	277.266	28.3086	12.0803
12	30.0000	148.634	297.268	33.9703	14.4964
13	40.0000	167.727	335.454	45.2937	19.3285
14	50.0000	186.143	372.286	56.6172	24.1606
15	60.0000	204.178	408.357	67.9406	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	64.7179	129.436	1.31129	0.483212
1	1.50000	68.8600	137.720	1.96693	0.724818
2	2.00000	72.3777	144.755	2.62258	0.966423
3	3.00000	78.3715	156.743	3.93386	1.44964
4	4.00000	83.4897	166.979	5.24515	1.93285
5	5.00000	88.0117	176.023	6.55644	2.41606
6	6.00000	92.0904	184.181	7.86773	2.89927
7	8.00000	99.2992	198.598	10.4903	3.86569
8	10.0000	105.651	211.302	13.1129	4.83212
9	15.0000	119.458	238.916	19.6693	7.24818
10	20.0000	131.698	263.396	26.2258	9.66423
11	25.0000	143.107	286.213	32.7822	12.0803
12	30.0000	154.002	308.004	39.3386	14.4964
13	40.0000	174.885	349.770	52.4515	19.3285
14	50.0000	195.090	390.180	65.5644	24.1606
15	60.0000	214.915	429.830	78.6773	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.3707	130.741	1.96404	0.483212
1	1.50000	69.8391	139.678	2.94607	0.724818
2	2.00000	73.6833	147.367	3.92809	0.966423
3	3.00000	80.3298	160.660	5.89213	1.44964
4	4.00000	86.1007	172.201	7.85618	1.93285
5	5.00000	91.2755	182.551	9.82022	2.41606
6	6.00000	96.0069	192.014	11.7843	2.89927
7	8.00000	104.521	209.042	15.7124	3.86569
8	10.0000	112.178	224.357	19.6404	4.83212
9	15.0000	129.249	258.498	29.4607	7.24818
10	20.0000	144.753	289.507	39.2809	9.66423
11	25.0000	159.426	318.851	49.1011	12.0803
12	30.0000	173.585	347.170	58.9213	14.4964
13	40.0000	200.995	401.990	78.5618	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6365	131.273	2.22985	0.483212
1	1.50000	70.2378	140.476	3.34477	0.724818
2	2.00000	74.2149	148.430	4.45970	0.966423
3	3.00000	81.1272	162.254	6.68955	1.44964
4	4.00000	87.1639	174.328	8.91939	1.93285
5	5.00000	92.6045	185.209	11.1492	2.41606
6	6.00000	97.6017	195.203	13.3791	2.89927
7	8.00000	106.648	213.295	17.8388	3.86569
8	10.0000	114.837	229.673	22.2985	4.83212
9	15.0000	133.236	266.473	33.4477	7.24818
10	20.0000	150.069	300.139	44.5970	9.66423
11	25.0000	166.071	332.141	55.7462	12.0803
12	30.0000	181.559	363.118	66.8955	14.4964
13	40.0000	211.627	423.255	89.1939	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ƵTG	150.000	ƵX	20.0000	GAMMA0	0.0180000
ƵL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6365	131.273	2.22985	0.483212
1	1.50000	70.2378	140.476	3.34477	0.724818
2	2.00000	74.2149	148.430	4.45970	0.966423
3	3.00000	81.1272	162.254	6.68955	1.44964
4	4.00000	87.1639	174.328	8.91939	1.93285
5	5.00000	92.6045	185.209	11.1492	2.41606
6	6.00000	97.6017	195.203	13.3791	2.89927
7	8.00000	106.648	213.295	17.8388	3.86569
8	10.0000	114.837	229.673	22.2985	4.83212
9	15.0000	133.236	266.473	33.4477	7.24818
10	20.0000	150.069	300.139	44.5970	9.66423
11	25.0000	166.071	332.141	55.7462	12.0803
12	30.0000	181.559	363.118	66.8955	14.4964
13	40.0000	211.627	423.255	89.1939	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6365	131.273	2.22985	0.483212
1	1.50000	70.2378	140.476	3.34477	0.724818
2	2.00000	74.2149	148.430	4.45970	0.966423
3	3.00000	81.1272	162.254	6.68955	1.44964
4	4.00000	87.1639	174.328	8.91939	1.93285
5	5.00000	92.6045	185.209	11.1492	2.41606
6	6.00000	97.6017	195.203	13.3791	2.89927
7	8.00000	106.648	213.295	17.8388	3.86569
8	10.0000	114.837	229.673	22.2985	4.83212
9	15.0000	133.236	266.473	33.4477	7.24818
10	20.0000	150.069	300.139	44.5970	9.66423
11	25.0000	166.071	332.141	55.7462	12.0803
12	30.0000	181.559	363.118	66.8955	14.4964
13	40.0000	211.627	423.255	89.1939	19.3285

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.8669	141.734	1.11520	0.483212
1	1.50000	75.1420	150.284	1.67279	0.724818
2	2.00000	78.7629	157.526	2.23039	0.966423
3	3.00000	84.9264	169.853	3.34559	1.44964
4	4.00000	90.1797	180.359	4.46079	1.93285
5	5.00000	94.8000	189.600	5.57598	2.41606
6	6.00000	98.9361	197.872	6.69118	2.89927
7	8.00000	106.143	212.287	8.92157	3.86569
8	10.0000	112.372	224.744	11.1520	4.83212
9	15.0000	125.587	251.173	16.7279	7.24818
10	20.0000	137.058	274.116	22.3039	9.66423
11	25.0000	147.625	295.251	27.8799	12.0803
12	30.0000	157.640	315.280	33.4559	14.4964
13	40.0000	176.691	353.382	44.6079	19.3285
14	50.0000	195.018	390.036	55.7598	24.1606
15	60.0000	212.949	425.899	66.9118	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.8841	141.768	1.13234	0.483212
1	1.50000	75.1677	150.335	1.69852	0.724818
2	2.00000	78.7972	157.594	2.26469	0.966423
3	3.00000	84.9778	169.956	3.39703	1.44964
4	4.00000	90.2483	180.497	4.52937	1.93285
5	5.00000	94.8857	189.771	5.66172	2.41606
6	6.00000	99.0390	198.078	6.79406	2.89927
7	8.00000	106.281	212.561	9.05875	3.86569
8	10.0000	112.544	225.087	11.3234	4.83212
9	15.0000	125.844	251.688	16.9852	7.24818
10	20.0000	137.401	274.802	22.6469	9.66423
11	25.0000	148.054	296.108	28.3086	12.0803
12	30.0000	158.155	316.309	33.9703	14.4964
13	40.0000	177.377	354.754	45.2937	19.3285
14	50.0000	195.875	391.751	56.6172	24.1606
15	60.0000	213.978	427.956	67.9406	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.0630	142.126	1.31129	0.485212
1	1.50000	75.4361	150.872	1.96693	0.724818
2	2.00000	79.1551	158.310	2.62258	0.966423
3	3.00000	85.5147	171.029	3.93386	1.44964
4	4.00000	90.9641	181.928	5.24515	1.93285
5	5.00000	95.7804	191.561	6.55644	2.41606
6	6.00000	100.113	200.225	7.86773	2.89927
7	8.00000	107.712	215.424	10.4903	3.86569
8	10.0000	114.333	228.666	13.1129	4.83212
9	15.0000	128.528	257.056	19.6693	7.24818
10	20.0000	140.980	281.960	26.2258	9.66423
11	25.0000	152.528	305.055	32.7822	12.0803
12	30.0000	163.523	327.046	39.3386	14.4964
13	40.0000	184.535	369.069	52.4515	19.3285
14	50.0000	204.823	409.645	65.5644	24.1606

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.7158	143.432	1.96404	0.483212
1	1.50000	76.4153	152.831	2.94607	0.724818
2	2.00000	80.4606	160.921	3.92809	0.966423
3	3.00000	87.4729	174.946	5.89213	1.44964
4	4.00000	93.5751	187.150	7.85618	1.93285
5	5.00000	99.0442	198.088	9.82022	2.41606
6	6.00000	104.029	208.058	11.7843	2.89927
7	8.00000	112.934	225.869	15.7124	3.86569
8	10.0000	120.861	241.721	19.6404	4.83212
9	15.0000	138.319	276.639	29.4607	7.24818
10	20.0000	154.035	308.070	39.2809	9.66423
11	25.0000	168.847	337.693	49.1011	12.0803
12	30.0000	183.106	366.211	58.9213	14.4964
13	40.0000	210.645	421.290	78.5618	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.9816	143.963	2.22985	0.483212
1	1.50000	76.8140	153.628	3.34477	0.724818
2	2.00000	80.9922	161.984	4.45970	0.966423
3	3.00000	88.2703	176.541	6.68955	1.44964
4	4.00000	94.6384	189.277	8.91939	1.93285
5	5.00000	100.373	200.746	11.1492	2.41606
6	6.00000	105.624	211.248	13.3791	2.89927
7	8.00000	115.061	230.121	17.8388	3.86569
8	10.0000	123.519	247.037	22.2985	4.83212
9	15.0000	142.306	284.613	33.4477	7.24818
10	20.0000	159.351	318.702	44.5970	9.66423
11	25.0000	175.492	350.984	55.7462	12.0803
12	30.0000	191.080	382.159	66.8955	14.4964
13	40.0000	221.277	442.554	89.1939	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.9816	143.963	2.22985	0.483212
1	1.50000	76.8140	153.628	3.34477	0.724818
2	2.00000	80.9922	161.984	4.45970	0.966423
3	3.00000	88.2703	176.541	6.68955	1.44964
4	4.00000	94.6384	189.277	8.91939	1.93285
5	5.00000	100.373	200.746	11.1492	2.41606
6	6.00000	105.624	211.248	13.3791	2.89927
7	8.00000	115.061	230.121	17.8388	3.86569
8	10.0000	123.519	247.037	22.2985	4.83212
9	15.0000	142.306	284.613	33.4477	7.24818
10	20.0000	159.351	318.702	44.5970	9.66423
11	25.0000	175.492	350.984	55.7462	12.0803
12	30.0000	191.080	382.159	66.8955	14.4964
13	40.0000	221.277	442.554	89.1939	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
HTG	250.000	ZX	20.0000	GAMMA0	0.0180000
HL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.9816	143.963	2.22985	0.483212
1	1.50000	76.8140	153.628	3.34477	0.724818
2	2.00000	80.9922	161.984	4.45970	0.966423
3	3.00000	88.2703	176.541	6.68955	1.44964
4	4.00000	94.6384	189.277	8.91939	1.93285
5	5.00000	100.373	200.746	11.1492	2.41606
6	6.00000	105.624	211.248	13.3791	2.89927
7	8.00000	115.061	230.121	17.8388	3.86569
8	10.0000	123.519	247.037	22.2985	4.83212
9	15.0000	142.306	284.613	33.4477	7.24818
10	20.0000	159.351	318.702	44.5970	9.66423
11	25.0000	175.492	350.984	55.7462	12.0803
12	30.0000	191.080	382.159	66.8955	14.4964
13	40.0000	221.277	442.554	89.1939	19.3285

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.5240	143.048	1.11520	0.483212
1	1.50000	75.9026	151.805	1.67279	0.724818
2	2.00000	79.5975	159.195	2.23039	0.966423
3	3.00000	85.8821	171.764	3.34559	1.44964
4	4.00000	91.2417	182.483	4.46079	1.93285
5	5.00000	95.9559	191.912	5.57598	2.41606
6	6.00000	100.173	200.346	6.69118	2.89927
7	8.00000	107.503	215.007	8.92157	3.86569
8	10.0000	113.813	227.626	11.1520	4.83212
9	15.0000	127.133	254.266	16.7279	7.24818
10	20.0000	138.652	277.305	22.3039	9.66423
11	25.0000	149.247	298.494	27.8799	12.0803
12	30.0000	159.279	318.559	33.4559	14.4964
13	40.0000	178.349	356.699	44.6079	19.3285
14	50.0000	196.685	393.371	55.7598	24.1606
15	60.0000	214.622	429.244	66.9118	28.9927

NPUT PARAMETERS

.WA	2.00000	FREQ	9.00000	CS	4947.00
TG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.5412	143.082	1.13234	0.483212
1	1.50000	75.9283	151.857	1.69852	0.724818
2	2.00000	79.6318	159.264	2.26469	0.966423
3	3.00000	85.9336	171.867	3.39703	1.44964
4	4.00000	91.3103	182.621	4.52937	1.93285
5	5.00000	96.0416	192.083	5.66172	2.41606
6	6.00000	100.276	200.552	6.79406	2.89927
7	8.00000	107.641	215.281	9.05875	3.86569
8	10.0000	113.985	227.969	11.3234	4.83212
9	15.0000	127.390	254.780	16.9852	7.24818
10	20.0000	138.995	277.991	22.6469	9.66423
11	25.0000	149.676	299.352	28.3086	12.0803
12	30.0000	159.794	319.587	33.9703	14.4964
13	40.0000	179.035	358.070	45.2937	19.3285
14	50.0000	197.543	395.086	56.6172	24.1606
15	60.0000	215.651	431.301	67.9406	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.7201	143.440	1.31129	0.483212
1	1.50000	76.1967	152.393	1.96693	0.724818
2	2.00000	79.9896	159.979	2.62258	0.966423
3	3.00000	86.4704	172.941	3.93386	1.44964
4	4.00000	92.0261	184.052	5.24515	1.93285
5	5.00000	96.9364	193.873	6.55644	2.41606
6	6.00000	101.350	202.699	7.86773	2.89927
7	8.00000	109.072	218.144	10.4903	3.86569
8	10.0000	115.774	231.548	13.1129	4.83212
9	15.0000	130.074	260.148	19.6693	7.24818
10	20.0000	142.574	285.149	26.2258	9.66423
11	25.0000	154.149	308.299	32.7822	12.0803
12	30.0000	165.162	330.324	39.3386	14.4964
13	40.0000	186.193	372.386	52.4515	19.3285
14	50.0000	206.490	412.980	65.5644	24.1606

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.3729	144.746	1.96404	0.483212
1	1.50000	77.1759	154.352	2.94607	0.724818
2	2.00000	81.2952	162.590	3.92809	0.966423
3	3.00000	88.4287	176.857	5.89213	1.44964
4	4.00000	94.6371	189.274	7.85618	1.93285
5	5.00000	100.200	200.400	9.82022	2.41606
6	6.00000	105.266	210.532	11.7843	2.89927
7	8.00000	114.294	228.588	15.7124	3.86569
8	10.0000	122.302	244.603	19.6404	4.83212
9	15.0000	139.866	279.731	29.4607	7.24818
10	20.0000	155.629	311.259	39.2809	9.66423
11	25.0000	170.468	340.937	49.1011	12.0803
12	30.0000	184.745	369.489	58.9213	14.4964
13	40.0000	212.303	424.606	78.5618	19.3285

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.6387	145.277	2.22985	0.483212
1	1.50000	77.5746	155.149	3.34477	0.724818
2	2.00000	81.8268	163.654	4.45970	0.966423
3	3.00000	89.2261	178.452	6.68955	1.44964
4	4.00000	95.7003	191.401	8.91939	1.93285
5	5.00000	101.529	203.058	11.1492	2.41606
6	6.00000	106.861	213.722	13.3791	2.89927
7	8.00000	116.421	232.841	17.8388	3.86569
8	10.0000	124.960	249.919	22.2985	4.83212
9	15.0000	143.853	287.705	33.4477	7.24818
10	20.0000	160.945	321.891	44.5970	9.66423
11	25.0000	177.113	354.227	55.7462	12.0803
12	30.0000	192.719	385.438	66.8955	14.4964
13	40.0000	222.935	445.871	89.1939	19.3285

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.6387	145.277	2.22985	0.483212
1	1.50000	77.5746	155.149	3.34477	0.724818
2	2.00000	81.8268	163.654	4.45970	0.966423
3	3.00000	89.2261	178.452	6.68955	1.44964
4	4.00000	95.7003	191.401	8.91939	1.93285
5	5.00000	101.529	203.058	11.1492	2.41606
6	6.00000	106.861	213.722	13.3791	2.89927
7	8.00000	116.421	232.841	17.8388	3.86569
8	10.0000	124.960	249.919	22.2985	4.83212
9	15.0000	143.853	287.705	33.4477	7.24818
10	20.0000	160.945	321.891	44.5970	9.66423
11	25.0000	177.113	354.227	55.7462	12.0803
12	30.0000	192.719	385.438	66.8955	14.4964
13	40.0000	222.935	445.871	89.1939	19.3285

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	368.000	ZX	20.0000	GAMMA0	0.0180000
ZL	150.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.6387	145.277	2.22985	0.483212
1	1.50000	77.5746	155.149	3.34477	0.724818
2	2.00000	81.8268	163.654	4.45970	0.966423
3	3.00000	89.2261	178.452	6.68955	1.44964
4	4.00000	95.7003	191.401	8.91939	1.93285
5	5.00000	101.529	203.058	11.1492	2.41606
6	6.00000	106.861	213.722	13.3791	2.89927
7	8.00000	116.421	232.841	17.8388	3.86569
8	10.0000	124.960	249.919	22.2985	4.83212
9	15.0000	143.853	287.705	33.4477	7.24818
10	20.0000	160.945	321.891	44.5970	9.66423
11	25.0000	177.113	354.227	55.7462	12.0803
12	30.0000	192.719	385.438	66.8955	14.4964
13	40.0000	222.935	445.871	89.1939	19.3285

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ETG	35.0000	ZX	20.0000	GAMMA0	0.0180000
EL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.6284	119.257	0.965738	0.483212
1	1.50000	62.1323	124.265	1.44861	0.724818
2	2.00000	64.1222	128.244	1.93148	0.966423
3	3.00000	67.3593	134.719	2.89722	1.44964
4	4.00000	70.0801	140.160	3.86295	1.93285
5	5.00000	72.5174	145.035	4.82869	2.41606
6	6.00000	74.7751	149.550	5.79443	2.89927
7	8.00000	78.9507	157.901	7.72591	3.86569
8	10.0000	82.8406	165.681	9.65738	4.83212
9	15.0000	91.8889	183.778	14.4861	7.24818
10	20.0000	100.413	200.826	19.3148	9.66423
11	25.0000	108.650	217.300	24.1435	12.0803
12	30.0000	116.705	233.411	28.9722	14.4964
13	40.0000	132.473	264.947	38.6295	19.3285
14	50.0000	147.954	295.908	48.2869	24.1606
15	60.0000	163.253	326.506	57.9443	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ℤTG	35.0000	ℤX	20.0000	GAMMA0	0.0180000
ℤL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.6433	119.287	0.980587	0.483212
1	1.50000	62.1546	124.309	1.47088	0.724818
2	2.00000	64.1519	128.304	1.96117	0.966423
3	3.00000	67.4039	134.808	2.94176	1.44964
4	4.00000	70.1395	140.279	3.92235	1.93285
5	5.00000	72.5917	145.183	4.90294	2.41606
6	6.00000	74.8642	149.728	5.88352	2.89927
7	8.00000	79.0695	158.139	7.84470	3.86569
8	10.0000	82.9891	165.978	9.80587	4.83212
9	15.0000	92.1116	184.223	14.7088	7.24818
10	20.0000	100.710	201.420	19.6117	9.66423
11	25.0000	109.021	218.043	24.5147	12.0803
12	30.0000	117.151	234.302	29.4176	14.4964
13	40.0000	133.067	266.135	39.2235	19.3285
14	50.0000	148.697	297.393	49.0294	24.1606
15	60.0000	164.144	328.288	58.8352	28.9927

AGE 2

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.7982	119.596	1.13555	0.483212
1	1.50000	62.3870	124.774	1.70332	0.724818
2	2.00000	64.4618	128.924	2.27110	0.966423
3	3.00000	67.8688	135.738	3.40665	1.44964
4	4.00000	70.7593	141.519	4.54220	1.93285
5	5.00000	73.3665	146.733	5.67775	2.41606
6	6.00000	75.7940	151.588	6.81330	2.89927
7	8.00000	80.3092	160.618	9.08440	3.86569
8	10.0000	84.5387	169.077	11.3555	4.83212
9	15.0000	94.4360	188.872	17.0332	7.24818
10	20.0000	103.809	207.619	22.7110	9.66423
11	25.0000	112.895	225.791	28.3887	12.0803
12	30.0000	121.800	243.600	34.0665	14.4964
13	40.0000	139.266	278.532	45.4220	19.3285
14	50.0000	156.445	312.889	56.7775	24.1606
15	60.0000	173.442	346.884	68.1330	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	60.3635	120.727	1.70082	0.483212
1	1.50000	63.2349	126.470	2.55124	0.724818
2	2.00000	65.5923	131.185	3.40165	0.966423
3	3.00000	69.5646	139.129	5.10247	1.44964
4	4.00000	73.0204	146.041	6.80330	1.93285
5	5.00000	76.1929	152.386	8.50412	2.41606
6	6.00000	79.1856	158.371	10.2049	2.89927
7	8.00000	84.8314	169.663	13.6066	3.86569
8	10.0000	90.1915	180.383	17.0082	4.83212
9	15.0000	102.915	205.830	25.5124	7.24818
10	20.0000	115.115	230.230	34.0165	9.66423
11	25.0000	127.027	254.055	42.5206	12.0803
12	30.0000	138.758	277.516	51.0247	14.4964
13	40.0000	161.877	323.754	68.0330	19.3285
14	50.0000	184.708	369.417	85.0412	24.1606
15	60.0000	207.358	414.717	102.049	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	60.5937	121.187	1.93101	0.483212
1	1.50000	63.5802	127.160	2.89651	0.724818
2	2.00000	66.0527	132.105	3.86201	0.966423
3	3.00000	70.2551	140.510	5.79302	1.44964
4	4.00000	73.9411	147.882	7.72402	1.93285
5	5.00000	77.3438	154.688	9.65503	2.41606
6	6.00000	80.5667	161.133	11.5860	2.89927
7	8.00000	86.6728	173.346	15.4480	3.86569
8	10.0000	92.4933	184.987	19.3101	4.83212
9	15.0000	106.368	212.736	28.9651	7.24818
10	20.0000	119.719	239.437	38.6201	9.66423
11	25.0000	132.782	265.564	48.2751	12.0803
12	30.0000	145.663	291.327	57.9302	14.4964
13	40.0000	171.084	342.168	77.2402	19.3285
14	50.0000	196.217	392.435	96.5503	24.1606
15	60.0000	221.169	442.339	115.860	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	60.5937	121.187	1.93101	0.483212
1	1.50000	63.5802	127.160	2.89651	0.724818
2	2.00000	66.0527	132.105	3.86201	0.966423
3	3.00000	70.2551	140.510	5.79302	1.44964
4	4.00000	73.9411	147.882	7.72402	1.93285
5	5.00000	77.3438	154.688	9.65503	2.41606
6	6.00000	80.5667	161.133	11.5860	2.89927
7	8.00000	86.6728	173.346	15.4480	3.86569
8	10.0000	92.4933	184.987	19.3101	4.83212
9	15.0000	106.368	212.736	28.9651	7.24818
10	20.0000	119.719	239.437	38.6201	9.66423
11	25.0000	132.782	265.564	48.2751	12.0803
12	30.0000	145.663	291.327	57.9302	14.4964
13	40.0000	171.084	342.168	77.2402	19.3285
14	50.0000	196.217	392.435	96.5503	24.1606
15	60.0000	221.169	442.339	115.860	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	60.5937	121.187	1.93101	0.483212
1	1.50000	63.5802	127.160	2.89651	0.724818
2	2.00000	66.0527	132.105	3.86201	0.966423
3	3.00000	70.2551	140.510	5.79302	1.44964
4	4.00000	73.9411	147.882	7.72402	1.93285
5	5.00000	77.3438	154.688	9.65503	2.41606
6	6.00000	80.5667	161.133	11.5860	2.89927
7	8.00000	86.6728	173.346	15.4480	3.86569
8	10.0000	92.4933	184.987	19.3101	4.83212
9	15.0000	106.368	212.736	28.9651	7.24818
10	20.0000	119.719	239.437	38.6201	9.66423
11	25.0000	132.782	265.564	48.2751	12.0803
12	30.0000	145.663	291.327	57.9302	14.4964
13	40.0000	171.084	342.168	77.2402	19.3285
14	50.0000	196.217	392.435	96.5503	24.1606
15	60.0000	221.169	442.339	115.860	28.9927

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6403	131.281	0.965738	0.483212
1	1.50000	68.2287	136.457	1.44861	0.724818
2	2.00000	70.2855	140.571	1.93148	0.966423
3	3.00000	73.6249	147.250	2.89722	1.44964
4	4.00000	76.4227	152.845	3.86295	1.93285
5	5.00000	78.9207	157.841	4.82869	2.41606
6	6.00000	81.2278	162.456	5.79443	2.89927
7	8.00000	85.4802	170.960	7.72591	3.86569
8	10.0000	89.4293	178.859	9.65738	4.83212
9	15.0000	98.5882	197.176	14.4861	7.24818
10	20.0000	107.198	214.396	19.3148	9.66423
11	25.0000	115.506	231.012	24.1435	12.0803
12	30.0000	123.622	247.245	28.9722	14.4964
13	40.0000	139.489	278.979	38.6295	19.3285
14	50.0000	155.047	310.093	48.2869	24.1606
15	60.0000	170.407	340.813	57.9443	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6552	131.310	0.980587	0.483212
1	1.50000	68.2510	136.502	1.47088	0.724818
2	2.00000	70.3152	140.630	1.96117	0.966423
3	3.00000	73.6695	147.339	2.94176	1.44964
4	4.00000	76.4821	152.964	3.92235	1.93285
5	5.00000	78.9950	157.990	4.90294	2.41606
6	6.00000	81.3169	162.634	5.88352	2.89927
7	8.00000	85.5990	171.198	7.84470	3.86569
8	10.0000	89.5777	179.155	9.80587	4.83212
9	15.0000	98.8110	197.622	14.7088	7.24818
10	20.0000	107.495	214.990	19.6117	9.66423
11	25.0000	115.877	231.755	24.5147	12.0803
12	30.0000	124.068	248.136	29.4176	14.4964
13	40.0000	140.083	280.166	39.2235	19.3285
14	50.0000	155.789	311.578	49.0294	24.1606
15	60.0000	171.298	342.595	58.8352	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.8102	131.620	1.13555	0.483212
1	1.50000	68.4834	136.967	1.70332	0.724818
2	2.00000	70.6251	141.250	2.27110	0.966423
3	3.00000	74.1343	148.269	3.40665	1.44964
4	4.00000	77.1020	154.204	4.54220	1.93285
5	5.00000	79.7698	159.540	5.67775	2.41606
6	6.00000	82.2466	164.493	6.81330	2.89927
7	8.00000	86.8387	173.677	9.08440	3.86569
8	10.0000	91.1274	182.255	11.3555	4.83212
9	15.0000	101.135	202.271	17.0332	7.24818
10	20.0000	110.594	221.188	22.7110	9.66423
11	25.0000	119.751	239.503	28.3887	12.0803
12	30.0000	128.717	257.433	34.0665	14.4964
13	40.0000	146.282	292.563	45.4220	19.3285
14	50.0000	163.537	327.074	56.7775	24.1606
15	60.0000	180.595	361.191	68.1330	28.9927

NPUT PARAMETERS

WA	4.00000	FREQ	9.00000	CS	4947.00
TG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.3754	132.751	1.70082	0.483212
1	1.50000	69.3313	138.663	2.55124	0.724818
2	2.00000	71.7557	143.511	3.40165	0.966423
3	3.00000	75.8302	151.660	5.10247	1.44964
4	4.00000	79.3631	158.726	6.80330	1.93285
5	5.00000	82.5962	165.192	8.50412	2.41606
6	6.00000	85.6383	171.277	10.2049	2.89927
7	8.00000	91.3609	182.722	13.6066	3.86569
8	10.0000	96.7801	193.560	17.0082	4.83212
9	15.0000	109.615	219.229	25.5124	7.24818
10	20.0000	121.900	243.799	34.0165	9.66423
11	25.0000	133.883	267.767	42.5206	12.0803
12	30.0000	145.675	291.350	51.0247	14.4964
13	40.0000	168.893	337.785	68.0330	19.3285
14	50.0000	191.801	383.602	85.0412	24.1606
15	60.0000	214.512	429.024	102.049	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.6056	133.211	1.93101	0.483212
1	1.50000	69.6766	139.353	2.89651	0.724818
2	2.00000	72.2160	144.432	3.86201	0.966423
3	3.00000	76.5207	153.041	5.79302	1.44964
4	4.00000	80.2838	160.568	7.72402	1.93285
5	5.00000	83.7471	167.494	9.65503	2.41606
6	6.00000	87.0194	174.039	11.5860	2.89927
7	8.00000	93.2024	186.405	15.4480	3.86569
8	10.0000	99.0819	198.164	19.3101	4.83212
9	15.0000	113.067	226.134	28.9651	7.24818
10	20.0000	126.503	253.007	38.6201	9.66423
11	25.0000	139.638	279.276	48.2751	12.0803
12	30.0000	152.580	305.161	57.9302	14.4964
13	40.0000	178.100	356.200	77.2402	19.3285
14	50.0000	203.310	406.620	96.5503	24.1606

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SURFACE CHANNEL PROPAGATION LOSS. FREQUENCY 9 KC/S. GAMMA 0 .01--ETC(U)
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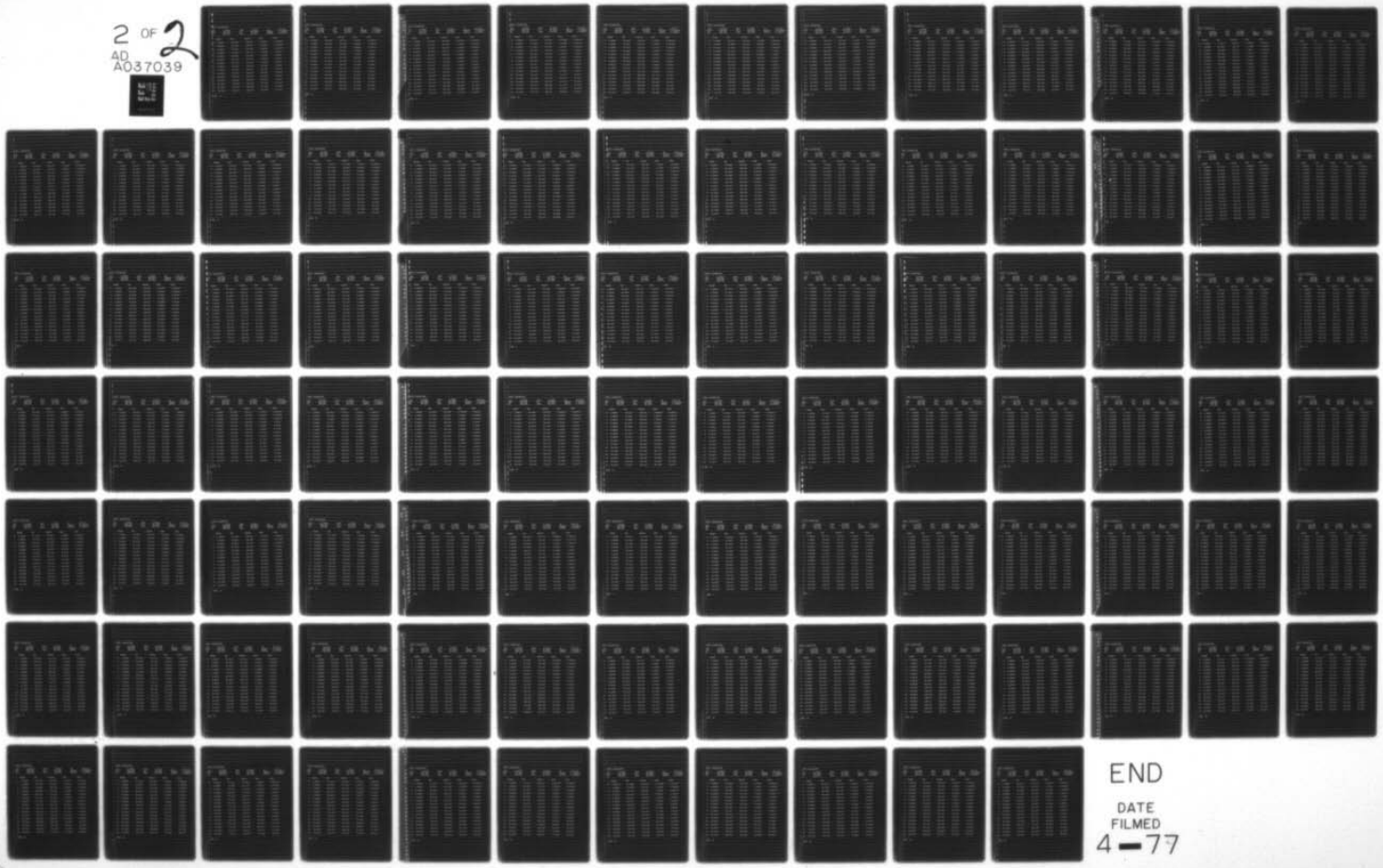

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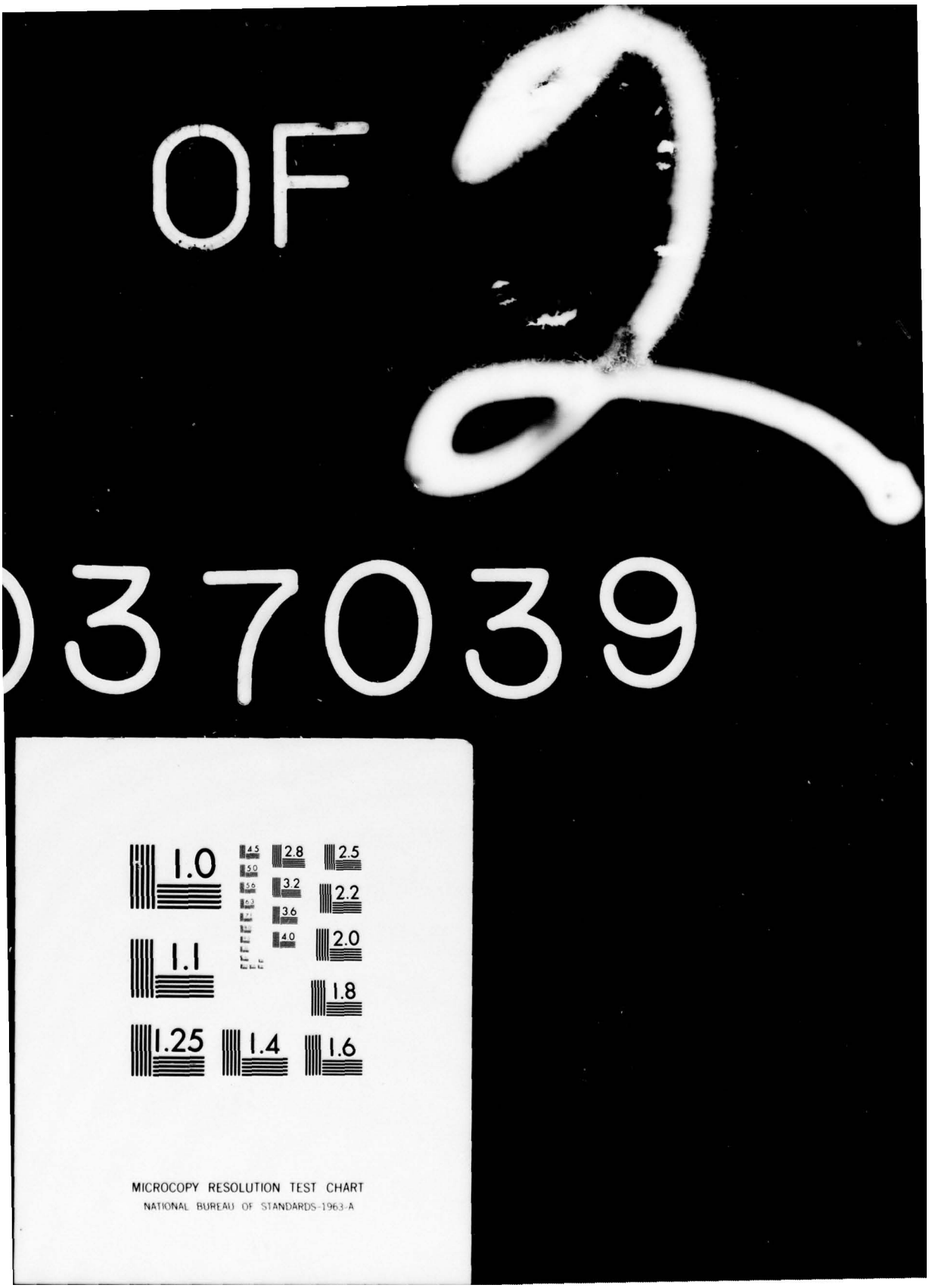
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

INPUT PARAMETERS

WA	8.00000	FREQ	9.00000	CS	4947.00
TG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.6056	133.211	1.93101	0.483212
1	1.50000	69.6766	139.353	2.89651	0.724818
2	2.00000	72.2160	144.432	3.86201	0.966423
3	3.00000	76.5207	153.041	5.79302	1.44964
4	4.00000	80.2838	160.568	7.72402	1.93285
5	5.00000	83.7471	167.494	9.65503	2.41606
6	6.00000	87.0194	174.039	11.5860	2.89927
7	8.00000	93.2024	186.405	15.4480	3.86569
8	10.0000	99.0819	198.164	19.3101	4.83212
9	15.0000	113.067	226.134	28.9651	7.24818
10	20.0000	126.503	253.007	38.6201	9.66423
11	25.0000	139.638	279.276	48.2751	12.0803
12	30.0000	152.580	305.161	57.9302	14.4964
13	40.0000	178.100	356.200	77.2402	19.3285
14	50.0000	203.310	406.620	96.5503	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	100.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.6056	133.211	1.93101	0.483212
1	1.50000	69.6766	139.353	2.89651	0.724818
2	2.00000	72.2160	144.432	3.86201	0.966423
3	3.00000	76.5207	153.041	5.79302	1.44964
4	4.00000	80.2838	160.568	7.72402	1.93285
5	5.00000	83.7471	167.494	9.65503	2.41606
6	6.00000	87.0194	174.039	11.5860	2.89927
7	8.00000	93.2024	186.405	15.4480	3.86569
8	10.0000	99.0819	198.164	19.3101	4.83212
9	15.0000	113.067	226.134	28.9651	7.24818
10	20.0000	126.503	253.007	38.6201	9.66423
11	25.0000	139.638	279.276	48.2751	12.0803
12	30.0000	152.580	305.161	57.9302	14.4964
13	40.0000	178.100	356.200	77.2402	19.3285
14	50.0000	203.310	406.620	96.5503	24.1606

NPUT PARAMETERS

WA	1.00000	FREQ	9.00000	CS	4947.00
TG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.8320	139.664	0.965738	0.483212
1	1.50000	72.9670	145.934	1.44861	0.724818
2	2.00000	75.4359	150.872	1.93148	0.966423
3	3.00000	79.3737	158.747	2.89722	1.44964
4	4.00000	82.6027	165.205	3.86295	1.93285
5	5.00000	85.4322	170.864	4.82869	2.41606
6	6.00000	88.0011	176.002	5.79443	2.89927
7	8.00000	92.6323	185.265	7.72591	3.86569
8	10.0000	96.8317	193.663	9.65738	4.83212
9	15.0000	106.326	212.652	14.4861	7.24818
10	20.0000	115.082	230.164	19.3148	9.66423
11	25.0000	123.461	246.921	24.1435	12.0803
12	30.0000	131.613	263.226	28.9722	14.4964
13	40.0000	147.510	295.020	38.6295	19.3285
14	50.0000	163.078	326.156	48.2869	24.1606
15	60.0000	178.445	356.890	57.9443	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ETG	200.000	EX	20.0000	GAMMA0	0.0180000
EL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	69.8469	139.694	0.980587	0.483212
1	1.50000	72.9893	145.979	1.47088	0.724818
2	2.00000	75.4656	150.931	1.96117	0.966423
3	3.00000	79.4183	158.837	2.94176	1.44964
4	4.00000	82.6621	165.324	3.92235	1.93285
5	5.00000	85.5064	171.013	4.90294	2.41606
6	6.00000	88.0902	176.180	5.88352	2.89927
7	8.00000	92.7511	185.502	7.84470	3.86569
8	10.0000	96.9802	193.960	9.80587	4.83212
9	15.0000	106.549	213.097	14.7088	7.24818
10	20.0000	115.379	230.758	19.6117	9.66423
11	25.0000	123.832	247.664	24.5147	12.0803
12	30.0000	132.059	264.117	29.4176	14.4964
13	40.0000	148.104	296.208	39.2235	19.3285
14	50.0000	163.820	327.641	49.0294	24.1606
15	60.0000	179.336	358.671	58.8352	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.0018	140.004	1.13555	0.483212
1	1.50000	73.2217	146.443	1.70332	0.724818
2	2.00000	75.7755	151.551	2.27110	0.966423
3	3.00000	79.8832	159.766	3.40665	1.44964
4	4.00000	83.2819	166.564	4.54220	1.93285
5	5.00000	86.2813	172.563	5.67775	2.41606
6	6.00000	89.0200	178.040	6.81330	2.89927
7	8.00000	93.9908	187.982	9.08440	3.86569
8	10.0000	98.5298	197.060	11.3555	4.83212
9	15.0000	108.873	217.746	17.0332	7.24818
10	20.0000	118.478	236.956	22.7110	9.66423
11	25.0000	127.706	255.412	28.3887	12.0803
12	30.0000	136.707	273.415	34.0665	14.4964
13	40.0000	154.302	308.605	45.4220	19.3285
14	50.0000	171.568	343.137	56.7775	24.1606
15	60.0000	188.633	377.267	68.1330	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	200.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.5671	141.134	1.70082	0.483212
1	1.50000	74.0696	148.139	2.55124	0.724818
2	2.00000	76.9061	153.812	3.40165	0.966423
3	3.00000	81.5790	163.158	5.10247	1.44964
4	4.00000	85.5430	171.086	6.80330	1.93285
5	5.00000	89.1076	178.215	8.50412	2.41606
6	6.00000	92.4116	184.823	10.2049	2.89927
7	8.00000	98.5130	197.026	13.6066	3.86569
8	10.0000	104.183	208.365	17.0082	4.83212
9	15.0000	117.352	234.704	25.5124	7.24818
10	20.0000	129.784	259.567	34.0165	9.66423
11	25.0000	141.838	283.676	42.5206	12.0803
12	30.0000	153.666	307.331	51.0247	14.4964
13	40.0000	176.913	353.827	68.0330	19.3285
14	50.0000	199.832	399.664	85.0412	24.1606
15	60.0000	222.550	445.100	102.049	28.9927

NPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
:TG	200.000	ZX	20.0000	GAMMA0	0.0180000
:L	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.7973	141.595	1.93101	0.483212
1	1.50000	74.4149	148.830	2.89651	0.724818
2	2.00000	77.3664	154.733	3.86201	0.966423
3	3.00000	82.2695	164.539	5.79302	1.44964
4	4.00000	86.4637	172.927	7.72402	1.93285
5	5.00000	90.2585	180.517	9.65503	2.41606
6	6.00000	93.7927	187.585	11.5860	2.89927
7	8.00000	100.354	200.709	15.4480	3.86569
8	10.0000	106.484	212.969	19.3101	4.83212
9	15.0000	120.805	241.610	28.9651	7.24818
10	20.0000	134.387	268.775	38.6201	9.66423
11	25.0000	147.592	295.185	48.2751	12.0803
12	30.0000	160.571	321.142	57.9302	14.4964
13	40.0000	186.121	372.241	77.2402	19.3285
14	50.0000	211.341	422.682	96.5503	24.1606

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ETG	200.000	ZX	20.0000	GAMMA0	0.0180000
EL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.7973	141.595	1.93101	0.483212
1	1.50000	74.4149	148.830	2.89651	0.724818
2	2.00000	77.3664	154.733	3.86201	0.966423
3	3.00000	82.2695	164.539	5.79302	1.44964
4	4.00000	86.4637	172.927	7.72402	1.93285
5	5.00000	90.2585	180.517	9.65503	2.41606
6	6.00000	93.7927	187.585	11.5860	2.89927
7	8.00000	100.354	200.709	15.4480	3.86569
8	10.0000	106.484	212.969	19.3101	4.83212
9	15.0000	120.805	241.610	28.9651	7.24818
10	20.0000	134.387	268.775	38.6201	9.66423
11	25.0000	147.592	295.185	48.2751	12.0803
12	30.0000	160.571	321.142	57.9302	14.4964
13	40.0000	186.121	372.241	77.2402	19.3285
14	50.0000	211.341	422.682	96.5503	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ETG	200.000	EX	20.0000	GAMMA0	0.0180000
EL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	70.7973	141.595	1.93101	0.483212
1	1.50000	74.4149	148.830	2.89651	0.724818
2	2.00000	77.3664	154.733	3.86201	0.966423
3	3.00000	82.2695	164.539	5.79302	1.44964
4	4.00000	86.4637	172.927	7.72402	1.93285
5	5.00000	90.2585	180.517	9.65503	2.41606
6	6.00000	93.7927	187.585	11.5860	2.89927
7	8.00000	100.354	200.709	15.4480	3.86569
8	10.0000	106.484	212.969	19.3101	4.83212
9	15.0000	120.805	241.610	28.9651	7.24818
10	20.0000	134.387	268.775	38.6201	9.66423
11	25.0000	147.592	295.185	48.2751	12.0803
12	30.0000	160.571	321.142	57.9302	14.4964
13	40.0000	186.121	372.241	77.2402	19.3285
14	50.0000	211.341	422.682	96.5503	24.1606

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	77.5522	155.104	0.965738	0.483212
1	1.50000	81.3364	162.673	1.44861	0.724818
2	2.00000	84.2558	168.512	1.93148	0.966423
3	3.00000	88.7439	177.488	2.89722	1.44964
4	4.00000	92.3071	184.614	3.86295	1.93285
5	5.00000	95.3815	190.763	4.82869	2.41606
6	6.00000	98.1463	196.293	5.79443	2.89927
7	8.00000	103.074	206.149	7.72591	3.86569
8	10.0000	107.483	214.966	9.65738	4.83212
9	15.0000	117.283	234.566	14.4861	7.24818
10	20.0000	126.195	252.389	19.3148	9.66423
11	25.0000	134.664	269.328	24.1435	12.0803
12	30.0000	142.875	285.750	28.9722	14.4964
13	40.0000	158.841	317.682	38.6295	19.3285
14	50.0000	174.448	348.896	48.2869	24.1606
15	60.0000	189.840	379.680	57.9443	28.9927

NPUT PARAMETERS

WA	2.00000	FREQ	9.00000	CS	4947.00
TG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	77.5670	155.134	0.980587	0.483212
1	1.50000	81.3587	162.717	1.47088	0.724818
2	2.00000	84.2855	168.571	1.96117	0.966423
3	3.00000	88.7884	177.577	2.94176	1.44964
4	4.00000	92.3665	184.733	3.92235	1.93285
5	5.00000	95.4558	190.912	4.90294	2.41606
6	6.00000	98.2354	196.471	5.88352	2.89927
7	8.00000	103.193	206.386	7.84470	3.86569
8	10.0000	107.632	215.263	9.80587	4.83212
9	15.0000	117.506	235.012	14.7088	7.24818
10	20.0000	126.492	252.983	19.6117	9.66423
11	25.0000	135.035	270.071	24.5147	12.0803
12	30.0000	143.320	286.641	29.4176	14.4964
13	40.0000	159.435	318.870	39.2235	19.3285
14	50.0000	175.191	350.381	49.0294	24.1606
15	60.0000	190.731	381.461	58.8352	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	77.7220	155.444	1.13555	0.483212
1	1.50000	81.5912	163.182	1.70332	0.724818
2	2.00000	84.5954	169.191	2.27110	0.966423
3	3.00000	89.2533	178.507	3.40665	1.44964
4	4.00000	92.9864	185.973	4.54220	1.93285
5	5.00000	96.2306	192.461	5.67775	2.41606
6	6.00000	99.1652	198.330	6.81330	2.89927
7	8.00000	104.433	208.866	9.08440	3.86569
8	10.0000	109.181	218.362	11.3555	4.83212
9	15.0000	119.830	239.661	17.0332	7.24818
10	20.0000	129.591	259.182	22.7110	9.66423
11	25.0000	138.909	277.819	28.3887	12.0803
12	30.0000	147.969	295.938	34.0665	14.4964
13	40.0000	165.634	331.267	45.4220	19.3285
14	50.0000	182.939	365.878	56.7775	24.1606
15	60.0000	200.028	400.057	68.1330	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.2873	156.575	1.70082	0.483212
1	1.50000	82.4391	164.878	2.55124	0.724818
2	2.00000	85.7259	171.452	3.40165	0.966423
3	3.00000	90.9491	181.898	5.10247	1.44964
4	4.00000	95.2475	190.495	6.80330	1.93285
5	5.00000	99.0569	198.114	8.50412	2.41606
6	6.00000	102.557	205.114	10.2049	2.89927
7	8.00000	108.955	217.910	13.6066	3.86569
8	10.0000	114.834	229.668	17.0082	4.83212
9	15.0000	128.309	256.619	25.5124	7.24818
10	20.0000	140.896	281.793	34.0165	9.66423
11	25.0000	153.041	306.082	42.5206	12.0803
12	30.0000	164.927	329.855	51.0247	14.4964
13	40.0000	188.245	376.489	68.0330	19.3285
14	50.0000	211.203	422.405	85.0412	24.1606

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.5174	157.035	1.93101	0.483212
1	1.50000	82.7843	165.569	2.89651	0.724818
2	2.00000	86.1863	172.373	3.86201	0.966423
3	3.00000	91.6397	183.279	5.79302	1.44964
4	4.00000	96.1682	192.336	7.72402	1.93285
5	5.00000	100.208	200.416	9.65503	2.41606
6	6.00000	103.938	207.876	11.5860	2.89927
7	8.00000	110.797	221.593	15.4480	3.86569
8	10.0000	117.136	234.272	19.3101	4.83212
9	15.0000	131.762	263.524	28.9651	7.24818
10	20.0000	145.500	291.000	38.6201	9.66423
11	25.0000	158.796	317.592	48.2751	12.0803
12	30.0000	171.833	343.666	57.9302	14.4964
13	40.0000	197.452	394.904	77.2402	19.3285
14	50.0000	222.712	445.423	96.5503	24.1606

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ETG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.5174	157.035	1.93101	0.483212
1	1.50000	82.7843	165.569	2.89651	0.724818
2	2.00000	86.1863	172.373	3.86201	0.966423
3	3.00000	91.6397	183.279	5.79302	1.44964
4	4.00000	96.1682	192.336	7.72402	1.93285
5	5.00000	100.208	200.416	9.65503	2.41606
6	6.00000	103.938	207.876	11.5860	2.89927
7	8.00000	110.797	221.593	15.4480	3.86569
8	10.0000	117.136	234.272	19.3101	4.83212
9	15.0000	131.762	263.524	28.9651	7.24818
10	20.0000	145.500	291.000	38.6201	9.66423
11	25.0000	158.796	317.592	48.2751	12.0803
12	30.0000	171.833	343.666	57.9302	14.4964
13	40.0000	197.452	394.904	77.2402	19.3285
14	50.0000	222.712	445.423	96.5503	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.5174	157.035	1.93101	0.483212
1	1.50000	82.7843	165.569	2.89651	0.724818
2	2.00000	86.1863	172.373	3.86201	0.966423
3	3.00000	91.6397	183.279	5.79302	1.44964
4	4.00000	96.1682	192.336	7.72402	1.93285
5	5.00000	100.208	200.416	9.65503	2.41606
6	6.00000	103.938	207.876	11.5860	2.89927
7	8.00000	110.797	221.593	15.4480	3.86569
8	10.0000	117.136	234.272	19.3101	4.83212
9	15.0000	131.762	263.524	28.9651	7.24818
10	20.0000	145.500	291.000	38.6201	9.66423
11	25.0000	158.796	317.592	48.2751	12.0803
12	30.0000	171.833	343.666	57.9302	14.4964
13	40.0000	197.452	394.904	77.2402	19.3285
14	50.0000	222.712	445.423	96.5503	24.1606

ZTG

NPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
TG	424.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.3207	156.641	0.965738	0.483212
1	1.50000	82.3922	164.784	1.44861	0.724818
2	2.00000	85.5001	171.000	1.93148	0.966423
3	3.00000	90.1907	180.381	2.89722	1.44964
4	4.00000	93.8449	187.690	3.86295	1.93285
5	5.00000	96.9706	193.941	4.82869	2.41606
6	6.00000	99.7707	199.541	5.79443	2.89927
7	8.00000	104.747	209.493	7.72591	3.86569
8	10.0000	109.186	218.371	9.65738	4.83212
9	15.0000	119.024	238.048	14.4861	7.24818
10	20.0000	127.951	255.903	19.3148	9.66423
11	25.0000	136.428	272.857	24.1435	12.0803
12	30.0000	144.643	289.287	28.9722	14.4964
13	40.0000	160.614	321.228	38.6295	19.3285
14	50.0000	176.223	352.446	48.2869	24.1606
15	60.0000	191.616	383.231	57.9443	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	424.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.3356	156.671	0.980587	0.483212
1	1.50000	82.4145	164.829	1.47088	0.724818
2	2.00000	85.5298	171.060	1.96117	0.966423
3	3.00000	90.2353	180.471	2.94176	1.44964
4	4.00000	93.9043	187.809	3.92235	1.93285
5	5.00000	97.0449	194.090	4.90294	2.41606
6	6.00000	99.8598	199.720	5.88352	2.89927
7	8.00000	104.865	209.731	7.84470	3.86569
8	10.0000	109.334	218.668	9.80587	4.83212
9	15.0000	119.247	238.494	14.7088	7.24818
10	20.0000	128.248	256.497	19.6117	9.66423
11	25.0000	136.800	273.599	24.5147	12.0803
12	30.0000	145.089	290.178	29.4176	14.4964
13	40.0000	161.208	322.416	39.2235	19.3285
14	50.0000	176.965	353.931	49.0294	24.1606
15	60.0000	192.507	385.013	58.8352	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ETG	424.000	ZX	20.0000	GAMMA0	0.0180000
EL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	78.4906	156.981	1.13555	0.483212
1	1.50000	82.6469	165.294	1.70332	0.724818
2	2.00000	85.8397	171.679	2.27110	0.966423
3	3.00000	90.7002	181.400	3.40665	1.44964
4	4.00000	94.5241	189.048	4.54220	1.93285
5	5.00000	97.8197	195.639	5.67775	2.41606
6	6.00000	100.790	201.579	6.81330	2.89927
7	8.00000	106.105	212.210	9.08440	3.86569
8	10.0000	110.884	221.767	11.3555	4.83212
9	15.0000	121.571	243.143	17.0332	7.24818
10	20.0000	131.348	262.695	22.7110	9.66423
11	25.0000	140.674	281.347	28.3887	12.0803
12	30.0000	149.738	299.475	34.0665	14.4964
13	40.0000	167.406	334.813	45.4220	19.3285
14	50.0000	184.714	369.427	56.7775	24.1606
15	60.0000	201.804	403.609	68.1330	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ETG	424.000	ZX	20.0000	GAMMA0	0.0180000
EL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	79.0558	158.112	1.70082	0.485212
1	1.50000	83.4949	166.990	2.55124	0.724818
2	2.00000	86.9703	173.941	3.40165	0.966423
3	3.00000	92.3960	184.792	5.10247	1.44964
4	4.00000	96.7852	193.570	6.80330	1.93285
5	5.00000	100.646	201.292	8.50412	2.41606
6	6.00000	104.181	208.362	10.2049	2.89927
7	8.00000	110.627	221.255	13.6066	3.86569
8	10.0000	116.536	233.073	17.0082	4.83212
9	15.0000	130.050	260.101	25.5124	7.24818
10	20.0000	142.653	285.306	34.0165	9.66423
11	25.0000	154.805	309.611	42.5206	12.0803
12	30.0000	166.696	333.392	51.0247	14.4964
13	40.0000	190.017	380.035	68.0330	19.3285
14	50.0000	212.977	425.955	85.0412	24.1606

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	424.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	79.2860	158.572	1.93101	0.483212
1	1.50000	83.8401	167.680	2.89651	0.724818
2	2.00000	87.4306	174.861	3.86201	0.966423
3	3.00000	93.0865	186.173	5.79302	1.44964
4	4.00000	97.7059	195.412	7.72402	1.93285
5	5.00000	101.797	203.594	9.65503	2.41606
6	6.00000	105.562	211.125	11.5860	2.89927
7	8.00000	112.469	224.937	15.4480	3.86569
8	10.0000	118.838	237.677	19.3101	4.83212
9	15.0000	133.503	267.006	28.9651	7.24818
10	20.0000	147.257	294.513	38.6201	9.66423
11	25.0000	160.560	321.120	48.2751	12.0803
12	30.0000	173.601	347.203	57.9302	14.4964
13	40.0000	199.225	398.449	77.2402	19.3285
14	50.0000	224.486	448.973	96.5503	24.1606

NPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
TG	424.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	79.2860	158.572	1.93101	0.483212
1	1.50000	83.8401	167.680	2.89651	0.724818
2	2.00000	87.4306	174.861	3.86201	0.966423
3	3.00000	93.0865	186.173	5.79302	1.44964
4	4.00000	97.7059	195.412	7.72402	1.93285
5	5.00000	101.797	203.594	9.65503	2.41606
6	6.00000	105.562	211.125	11.5860	2.89927
7	8.00000	112.469	224.937	15.4480	3.86569
8	10.0000	118.838	237.677	19.3101	4.83212
9	15.0000	133.503	267.006	28.9651	7.24818
10	20.0000	147.257	294.513	38.6201	9.66423
11	25.0000	160.560	321.120	48.2751	12.0803
12	30.0000	173.601	347.203	57.9302	14.4964
13	40.0000	199.225	398.449	77.2402	19.3285
14	50.0000	224.486	448.973	96.5503	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	424.000	ZX	20.0000	GAMMA0	0.0180000
ZL	200.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	79.2860	158.572	1.93101	0.483212
1	1.50000	83.8401	167.680	2.89651	0.724818
2	2.00000	87.4306	174.861	3.86201	0.966423
3	3.00000	93.0865	186.173	5.79302	1.44964
4	4.00000	97.7059	195.412	7.72402	1.93285
5	5.00000	101.797	203.594	9.65503	2.41606
6	6.00000	105.562	211.125	11.5860	2.89927
7	8.00000	112.469	224.937	15.4480	3.86569
8	10.0000	118.838	237.677	19.3101	4.83212
9	15.0000	133.503	267.006	28.9651	7.24818
10	20.0000	147.257	294.513	38.6201	9.66423
1	25.0000	160.560	321.120	48.2751	12.0803
12	30.0000	173.601	347.203	57.9302	14.4964
13	40.0000	199.225	398.449	77.2402	19.3285
4	50.0000	224.486	448.973	96.5503	24.1606

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.1587	118.317	0.788452	0.483212
1	1.50000	61.5766	123.153	1.18268	0.724818
2	2.00000	63.4777	126.955	1.57690	0.966423
3	3.00000	66.5319	133.064	2.36536	1.44964
4	4.00000	69.0664	138.133	3.15381	1.93285
5	5.00000	71.3161	142.632	3.94226	2.41606
6	6.00000	73.3861	146.772	4.73071	2.89927
7	8.00000	77.1879	154.376	6.30762	3.86569
8	10.0000	80.7069	161.414	7.88452	4.83212
9	15.0000	88.8373	177.675	11.8268	7.24818
10	20.0000	96.4526	192.905	15.7690	9.66423
11	25.0000	103.786	207.571	19.7113	12.0803
12	30.0000	110.940	221.881	23.6536	14.4964
13	40.0000	124.913	249.826	31.5381	19.3285
14	50.0000	138.604	277.208	39.4226	24.1606
15	60.0000	152.116	304.233	47.3071	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ETG	35.0000	ZX	20.0000	GAMMA0	0.0180000
EL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.1708	118.342	0.800575	0.483212
1	1.50000	61.5948	123.190	1.20086	0.724818
2	2.00000	63.5020	127.004	1.60115	0.966423
3	3.00000	66.5683	133.137	2.40173	1.44964
4	4.00000	69.1149	138.230	3.20230	1.93285
5	5.00000	71.3767	142.753	4.00288	2.41606
6	6.00000	73.4589	146.918	4.80345	2.89927
7	8.00000	77.2849	154.570	6.40460	3.86569
8	10.0000	80.8281	161.656	8.00575	4.83212
9	15.0000	89.0191	178.038	12.0086	7.24818
10	20.0000	96.6951	193.390	16.0115	9.66423
11	25.0000	104.089	208.178	20.0144	12.0803
12	30.0000	111.304	222.608	24.0173	14.4964
13	40.0000	125.398	250.796	32.0230	19.3285
14	50.0000	139.210	278.420	40.0288	24.1606
15	60.0000	152.844	305.688	48.0345	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.2973	118.595	0.927090	0.483212
1	1.50000	61.7845	123.569	1.39064	0.724818
2	2.00000	63.7550	127.510	1.85418	0.966423
3	3.00000	66.9478	133.896	2.78127	1.44964
4	4.00000	69.6209	139.242	3.70836	1.93285
5	5.00000	72.0093	144.019	4.63545	2.41606
6	6.00000	74.2179	148.436	5.56254	2.89927
7	8.00000	78.2970	156.594	7.41672	3.86569
8	10.0000	82.0933	164.187	9.27090	4.83212
9	15.0000	90.9169	181.834	13.9064	7.24818
10	20.0000	99.2254	198.451	18.5418	9.66423
11	25.0000	107.252	214.503	23.1773	12.0803
12	30.0000	115.100	230.199	27.8127	14.4964
13	40.0000	130.459	260.917	37.0836	19.3285
14	50.0000	145.536	291.072	46.3545	24.1606
15	60.0000	160.435	320.869	55.6254	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ETG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.7588	119.518	1.38859	0.483212
1	1.50000	62.4768	124.954	2.08289	0.724818
2	2.00000	64.6780	129.356	2.77719	0.966423
3	3.00000	68.3323	136.665	4.16578	1.44964
4	4.00000	71.4669	142.934	5.55438	1.93285
5	5.00000	74.3168	148.634	6.94297	2.41606
6	6.00000	76.9870	153.974	8.33157	2.89927
7	8.00000	81.9891	163.978	11.1088	3.86569
8	10.0000	86.7083	173.417	13.8859	4.83212
9	15.0000	97.8394	195.679	20.8289	7.24818
10	20.0000	108.455	216.911	27.7719	9.66423
11	25.0000	118.789	237.579	34.7149	12.0803
12	30.0000	128.945	257.889	41.6578	14.4964
13	40.0000	148.919	297.838	55.5438	19.3285
14	50.0000	168.611	337.222	69.4297	24.1606
15	60.0000	188.125	376.250	83.3157	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ETG	35.0000	EX	20.0000	GAMMA0	0.0180000
EL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.9468	119.894	1.57652	0.483212
1	1.50000	62.7587	125.517	2.36478	0.724818
2	2.00000	65.0539	130.108	3.15304	0.966423
3	3.00000	68.8961	137.792	4.72956	1.44964
4	4.00000	72.2186	144.437	6.30608	1.93285
5	5.00000	75.2565	150.513	7.88260	2.41606
6	6.00000	78.1145	156.229	9.45912	2.89927
7	8.00000	83.4925	166.985	12.6122	3.86569
8	10.0000	88.5876	177.175	15.7652	4.83212
9	15.0000	100.658	201.317	23.6478	7.24818
10	20.0000	112.214	224.428	31.5304	9.66423
11	25.0000	123.487	246.975	39.4130	12.0803
12	30.0000	134.582	269.165	47.2956	14.4964
13	40.0000	156.436	312.872	63.0608	19.3285
14	50.0000	178.007	356.015	78.8260	24.1606
15	60.0000	199.401	398.801	94.5912	28.9927

INPUT PARAMETERS

WA	8.00000	FREQ	9.00000	CS	4947.00
TG	35.0000	ZX	20.0000	GAMMA0	0.0180000
L	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.9468	119.894	1.57652	0.483212
1	1.50000	62.7587	125.517	2.36478	0.724818
2	2.00000	65.0539	130.108	3.15304	0.966423
3	3.00000	68.8961	137.792	4.72956	1.44964
4	4.00000	72.2186	144.437	6.30608	1.93285
5	5.00000	75.2565	150.513	7.88260	2.41606
6	6.00000	78.1145	156.229	9.45912	2.89927
7	8.00000	83.4925	166.985	12.6122	3.86569
8	10.0000	88.5876	177.175	15.7652	4.83212
9	15.0000	100.658	201.317	23.6478	7.24818
10	20.0000	112.214	224.428	31.5304	9.66423
11	25.0000	123.487	246.975	39.4130	12.0803
12	30.0000	134.582	269.165	47.2956	14.4964
13	40.0000	156.436	312.872	63.0608	19.3285
14	50.0000	178.007	356.015	78.8260	24.1606
15	60.0000	199.401	398.801	94.5912	28.9927

NPUT PARAMETERS

WA	10.0000	FREQ	9.00000	CS	4947.00
TG	35.0000	ZX	20.0000	GAMMAO	0.0180000
L	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.9468	119.894	1.57652	0.483212
1	1.50000	62.7587	125.517	2.36478	0.724818
2	2.00000	65.0539	130.108	3.15304	0.966423
3	3.00000	68.8961	137.792	4.72956	1.44964
4	4.00000	72.2186	144.437	6.30608	1.93285
5	5.00000	75.2565	150.513	7.88260	2.41606
6	6.00000	78.1145	156.229	9.45912	2.89927
7	8.00000	83.4925	166.985	12.6122	3.86569
8	10.0000	88.5876	177.175	15.7652	4.83212
9	15.0000	100.658	201.317	23.6478	7.24818
10	20.0000	112.214	224.428	31.5304	9.66423
11	25.0000	123.487	246.975	39.4130	12.0803
12	30.0000	134.582	269.165	47.2956	14.4964
13	40.0000	156.436	312.872	63.0608	19.3285
14	50.0000	178.007	356.015	78.8260	24.1606
15	60.0000	199.401	398.801	94.5912	28.9927

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.1004	124.201	0.788452	0.483212
1	1.50000	64.5944	129.189	1.18268	0.724818
2	2.00000	66.5585	133.117	1.57690	0.966423
3	3.00000	69.7077	139.415	2.36536	1.44964
4	4.00000	72.3079	144.616	3.15381	1.93285
5	5.00000	74.6039	149.208	3.94226	2.41606
6	6.00000	76.7069	153.414	4.73071	2.89927
7	8.00000	80.5511	161.102	6.30762	3.86569
8	10.0000	84.0946	168.189	7.88452	4.83212
9	15.0000	92.2553	184.511	11.8268	7.24818
10	20.0000	99.8852	199.770	15.7690	9.66423
11	25.0000	107.228	214.455	19.7113	12.0803
12	30.0000	114.389	228.778	23.6536	14.4964
13	40.0000	128.372	256.744	31.5381	19.3285
14	50.0000	142.070	284.140	39.4226	24.1606
15	60.0000	155.587	311.174	47.3071	28.9927

NPUT PARAMETERS

WA	2.00000	FREQ	9.00000	CS	4947.00
TG	150.000	ZX	20.0000	GAMMA0	0.0180000
L	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.1126	124.225	0.800575	0.483212
1	1.50000	64.6126	129.225	1.20086	0.724818
2	2.00000	66.5827	133.165	1.60115	0.966423
3	3.00000	69.7441	139.488	2.40173	1.44964
4	4.00000	72.3564	144.713	3.20230	1.93285
5	5.00000	74.6645	149.329	4.00288	2.41606
6	6.00000	76.7797	153.559	4.80345	2.89927
7	8.00000	80.6480	161.296	6.40460	3.86569
8	10.0000	84.2158	168.432	8.00575	4.83212
9	15.0000	92.4372	184.874	12.0086	7.24818
10	20.0000	100.128	200.255	16.0115	9.66423
11	25.0000	107.531	215.061	20.0144	12.0803
12	30.0000	114.753	229.506	24.0173	14.4964
13	40.0000	128.857	257.714	32.0230	19.3285
14	50.0000	142.676	285.352	40.0288	24.1606
15	60.0000	156.315	312.629	48.0345	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.2391	124.478	0.927090	0.483212
1	1.50000	64.8024	129.605	1.39064	0.724818
2	2.00000	66.8358	133.672	1.85418	0.966423
3	3.00000	70.1236	140.247	2.78127	1.44964
4	4.00000	72.8624	145.725	3.70836	1.93285
5	5.00000	75.2970	150.594	4.63545	2.41606
6	6.00000	77.5388	155.078	5.56254	2.89927
7	8.00000	81.6602	163.320	7.41672	3.86569
8	10.0000	85.4809	170.962	9.27090	4.83212
9	15.0000	94.3349	188.670	13.9064	7.24818
10	20.0000	102.658	205.316	18.5418	9.66423
11	25.0000	110.694	221.387	23.1773	12.0803
12	30.0000	118.548	237.097	27.8127	14.4964
13	40.0000	133.918	267.835	37.0836	19.3285
14	50.0000	149.002	298.003	46.3545	24.1606
15	60.0000	163.905	327.811	55.6254	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.7006	125.401	1.38859	0.483212
1	1.50000	65.4946	130.989	2.08289	0.724818
2	2.00000	67.7588	135.518	2.77719	0.966423
3	3.00000	71.5081	143.016	4.16578	1.44964
4	4.00000	74.7085	149.417	5.55438	1.93285
5	5.00000	77.6046	155.209	6.94297	2.41606
6	6.00000	80.3078	160.616	8.33157	2.89927
7	8.00000	85.3522	170.704	11.1088	3.86569
8	10.0000	90.0960	180.192	13.8859	4.83212
9	15.0000	101.257	202.515	20.8289	7.24818
10	20.0000	111.888	223.776	27.7719	9.66423
11	25.0000	122.231	244.462	34.7149	12.0803
12	30.0000	132.393	264.787	41.6578	14.4964
13	40.0000	152.378	304.756	55.5438	19.3285
14	50.0000	172.077	344.154	69.4297	24.1606
15	60.0000	191.596	383.191	83.3157	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.8885	125.777	1.57652	0.483212
1	1.50000	65.7765	131.553	2.36478	0.724818
2	2.00000	68.1346	136.269	3.15304	0.966423
3	3.00000	72.0719	144.144	4.72956	1.44964
4	4.00000	75.4602	150.920	6.30608	1.93285
5	5.00000	78.5442	157.088	7.88260	2.41606
6	6.00000	81.4353	162.871	9.45912	2.89927
7	8.00000	86.8556	173.711	12.6122	3.86569
8	10.0000	91.9752	183.950	15.7652	4.83212
9	15.0000	104.076	208.153	23.6478	7.24818
10	20.0000	115.647	231.293	31.5304	9.66423
11	25.0000	126.929	253.859	39.4130	12.0803
12	30.0000	138.031	276.062	47.2956	14.4964
13	40.0000	159.895	319.790	63.0608	19.3285
14	50.0000	181.473	362.946	78.8260	24.1606
15	60.0000	202.871	405.742	94.5912	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.8885	125.777	1.57652	0.483212
1	1.50000	65.7765	131.553	2.36478	0.724818
2	2.00000	68.1346	136.269	3.15304	0.966423
3	3.00000	72.0719	144.144	4.72956	1.44964
4	4.00000	75.4602	150.920	6.30608	1.93285
5	5.00000	78.5442	157.088	7.88260	2.41606
6	6.00000	81.4353	162.871	9.45912	2.89927
7	8.00000	86.8556	173.711	12.6122	3.86569
8	10.0000	91.9752	183.950	15.7652	4.83212
9	15.0000	104.076	208.153	23.6478	7.24818
10	20.0000	115.647	231.293	31.5304	9.66423
11	25.0000	126.929	253.859	39.4130	12.0803
12	30.0000	138.031	276.062	47.2956	14.4964
13	40.0000	159.895	319.790	63.0608	19.3285
14	50.0000	181.473	362.946	78.8260	24.1606
15	60.0000	202.871	405.742	94.5912	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	150.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	62.8885	125.777	1.57652	0.483212
1	1.50000	65.7765	131.553	2.36478	0.724818
2	2.00000	68.1346	136.269	3.15304	0.966423
3	3.00000	72.0719	144.144	4.72956	1.44964
4	4.00000	75.4602	150.920	6.30608	1.93285
5	5.00000	78.5442	157.088	7.88260	2.41606
6	6.00000	81.4353	162.871	9.45912	2.89927
7	8.00000	86.8556	173.711	12.6122	3.86569
8	10.0000	91.9752	183.950	15.7652	4.83212
9	15.0000	104.076	208.153	23.6478	7.24818
10	20.0000	115.647	231.293	31.5304	9.66423
11	25.0000	126.929	253.859	39.4130	12.0803
12	30.0000	138.031	276.062	47.2956	14.4964
13	40.0000	159.895	319.790	63.0608	19.3285
14	50.0000	181.473	362.946	78.8260	24.1606
15	60.0000	202.871	405.742	94.5912	28.9927

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.7981	131.596	0.788452	0.483212
1	1.50000	69.2105	138.421	1.18268	0.724818
2	2.00000	72.0561	144.112	1.57690	0.966423
3	3.00000	76.8528	153.706	2.36536	1.44964
4	4.00000	80.9351	161.870	3.15381	1.93285
5	5.00000	84.5395	169.079	3.94226	2.41606
6	6.00000	87.7797	175.559	4.73071	2.89927
7	8.00000	93.4295	186.859	6.30762	3.86569
8	10.0000	98.2694	196.539	7.88452	4.83212
9	15.0000	108.312	216.623	11.8268	7.24818
10	20.0000	116.883	233.766	15.7690	9.66423
11	25.0000	124.781	249.563	19.7113	12.0803
12	30.0000	132.315	264.630	23.6536	14.4964
13	40.0000	146.787	293.575	31.5381	19.3285
14	50.0000	160.818	321.636	39.4226	24.1606
15	60.0000	174.596	349.193	47.3071	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ℓTG	300.000	ℓX	20.0000	GAMMA0	0.0180000
ℓL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.8102	131.620	0.800575	0.483212
1	1.50000	69.2287	138.457	1.20086	0.724818
2	2.00000	72.0804	144.161	1.60115	0.966423
3	3.00000	76.8892	153.778	2.40173	1.44964
4	4.00000	80.9836	161.967	3.20230	1.93285
5	5.00000	84.6001	169.200	4.00288	2.41606
6	6.00000	87.8524	175.705	4.80345	2.89927
7	8.00000	93.5265	187.053	6.40460	3.86569
8	10.0000	98.3906	196.781	8.00575	4.83212
9	15.0000	108.493	216.987	12.0086	7.24818
10	20.0000	117.126	234.251	16.0115	9.66423
11	25.0000	125.084	250.169	20.0144	12.0803
12	30.0000	132.679	265.358	24.0173	14.4964
13	40.0000	147.272	294.545	32.0230	19.3285
14	50.0000	161.424	322.848	40.0288	24.1606
15	60.0000	175.324	350.648	48.0345	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.9367	131.873	0.927090	0.483212
1	1.50000	69.4184	138.837	1.39064	0.724818
2	2.00000	72.3334	144.667	1.85418	0.966423
3	3.00000	77.2687	154.537	2.78127	1.44964
4	4.00000	81.4897	162.979	3.70836	1.93285
5	5.00000	85.2327	170.465	4.63545	2.41606
6	6.00000	88.6115	177.223	5.56254	2.89927
7	8.00000	94.5386	189.077	7.41672	3.86569
8	10.0000	99.6558	199.312	9.27090	4.83212
9	15.0000	110.391	220.782	13.9064	7.24818
10	20.0000	119.656	239.312	18.5418	9.66423
11	25.0000	128.247	256.494	23.1773	12.0803
12	30.0000	136.474	272.949	27.8127	14.4964
13	40.0000	152.333	304.666	37.0836	19.3285
14	50.0000	167.750	335.500	46.3545	24.1606
15	60.0000	182.915	365.830	55.6254	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.3982	132.796	1.38859	0.483212
1	1.50000	70.1107	140.221	2.08289	0.724818
2	2.00000	73.2564	146.513	2.77719	0.966423
3	3.00000	78.6532	157.306	4.16578	1.44964
4	4.00000	83.3357	166.671	5.55438	1.93285
5	5.00000	87.5402	175.080	6.94297	2.41606
6	6.00000	91.3805	182.761	8.33157	2.89927
7	8.00000	98.2307	196.461	11.1088	3.86569
8	10.0000	104.271	208.542	13.8859	4.83212
9	15.0000	117.314	234.627	20.8289	7.24818
10	20.0000	128.886	257.772	27.7719	9.66423
11	25.0000	139.785	279.570	34.7149	12.0803
12	30.0000	150.319	300.639	41.6578	14.4964
13	40.0000	170.793	341.586	55.5438	19.3285
14	50.0000	190.825	381.650	69.4297	24.1606
15	60.0000	210.605	421.210	83.3157	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.5861	133.172	1.57652	0.483212
1	1.50000	70.3926	140.785	2.36478	0.724818
2	2.00000	73.6322	147.264	3.15304	0.966423
3	3.00000	79.2170	158.434	4.72956	1.44964
4	4.00000	84.0874	168.175	6.30608	1.93285
5	5.00000	88.4798	176.960	7.88260	2.41606
6	6.00000	92.5081	185.016	9.45912	2.89927
7	8.00000	99.7341	199.468	12.6122	3.86569
8	10.0000	106.150	212.300	15.7652	4.83212
9	15.0000	120.133	240.265	23.6478	7.24818
10	20.0000	132.645	265.289	31.5304	9.66423
11	25.0000	144.483	288.966	39.4130	12.0803
12	30.0000	155.957	311.914	47.2956	14.4964
13	40.0000	178.310	356.620	63.0608	19.3285
14	50.0000	200.221	400.442	78.8260	24.1606

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.5861	133.172	1.57652	0.483212
1	1.50000	70.3926	140.785	2.36478	0.724818
2	2.00000	73.6322	147.264	3.15304	0.966423
3	3.00000	79.2170	158.434	4.72956	1.44964
4	4.00000	84.0874	168.175	6.30608	1.93285
5	5.00000	88.4798	176.960	7.88260	2.41606
6	6.00000	92.5081	185.016	9.45912	2.89927
7	8.00000	99.7341	199.468	12.6122	3.86569
8	10.0000	106.150	212.300	15.7652	4.83212
9	15.0000	120.133	240.265	23.6478	7.24818
10	20.0000	132.645	265.289	31.5304	9.66423
11	25.0000	144.483	288.966	39.4130	12.0803
12	30.0000	155.957	311.914	47.2956	14.4964
13	40.0000	178.310	356.620	63.0608	19.3285
14	50.0000	200.221	400.442	78.8260	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	300.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.5861	133.172	1.57652	0.483212
1	1.50000	70.3926	140.785	2.36478	0.724818
2	2.00000	73.6322	147.264	3.15304	0.966423
3	3.00000	79.2170	158.434	4.72956	1.44964
4	4.00000	84.0874	168.175	6.30608	1.93285
5	5.00000	88.4798	176.960	7.88260	2.41606
6	6.00000	92.5081	185.016	9.45912	2.89927
7	8.00000	99.7341	199.468	12.6122	3.86569
8	10.0000	106.150	212.300	15.7652	4.83212
9	15.0000	120.133	240.265	23.6478	7.24818
10	20.0000	132.645	265.289	31.5304	9.66423
11	25.0000	144.483	288.966	39.4130	12.0803
12	30.0000	155.957	311.914	47.2956	14.4964
13	40.0000	178.310	356.620	63.0608	19.3285
14	50.0000	200.221	400.442	78.8260	24.1606

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	400.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.5923	145.185	0.788452	0.485212
1	1.50000	76.1507	152.301	1.18268	0.724818
2	2.00000	79.1315	158.263	1.57690	0.966423
3	3.00000	84.1915	168.383	2.36536	1.44964
4	4.00000	88.5421	177.084	3.15381	1.93285
5	5.00000	92.4215	184.843	3.94226	2.41606
6	6.00000	95.9363	191.873	4.73071	2.89927
7	8.00000	102.106	204.212	6.30762	3.86569
8	10.0000	107.390	214.779	7.88452	4.83212
9	15.0000	118.173	236.347	11.8268	7.24818
10	20.0000	127.138	254.276	15.7690	9.66423
11	25.0000	135.261	270.522	19.7113	12.0803
12	30.0000	142.937	285.873	23.6536	14.4964
13	40.0000	157.573	315.146	31.5381	19.3285
14	50.0000	171.694	343.387	39.4226	24.1606
15	60.0000	185.528	371.057	47.3071	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ℨTG	400.000	ℨX	20.0000	GAMMA0	0.0180000
ℨL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.6045	145.209	0.800575	0.483212
1	1.50000	76.1689	152.338	1.20086	0.724818
2	2.00000	79.1558	158.312	1.60115	0.966423
3	3.00000	84.2279	168.456	2.40173	1.44964
4	4.00000	88.5906	177.181	3.20230	1.93285
5	5.00000	92.4821	184.964	4.00288	2.41606
6	6.00000	96.0090	192.018	4.80345	2.89927
7	8.00000	102.203	204.406	6.40460	3.86569
8	10.0000	107.511	215.022	8.00575	4.83212
9	15.0000	118.355	236.710	12.0086	7.24818
10	20.0000	127.380	254.760	16.0115	9.66423
11	25.0000	135.564	271.128	20.0144	12.0803
12	30.0000	143.300	286.601	24.0173	14.4964
13	40.0000	158.058	316.116	32.0230	19.3285
14	50.0000	172.300	344.599	40.0288	24.1606
15	60.0000	186.256	372.511	48.0345	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	400.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.7310	145.462	0.927090	0.483212
1	1.50000	76.3587	152.717	1.39064	0.724818
2	2.00000	79.4088	158.818	1.85418	0.966423
3	3.00000	84.6075	169.215	2.78127	1.44964
4	4.00000	89.0966	178.193	3.70836	1.93285
5	5.00000	93.1147	186.229	4.63545	2.41606
6	6.00000	96.7681	193.536	5.56254	2.89927
7	8.00000	103.215	206.430	7.41672	3.86569
8	10.0000	108.776	217.552	9.27090	4.83212
9	15.0000	120.253	240.506	13.9064	7.24818
10	20.0000	129.911	259.821	18.5418	9.66423
11	25.0000	138.727	277.454	23.1773	12.0803
12	30.0000	147.096	294.192	27.8127	14.4964
13	40.0000	163.118	326.237	37.0836	19.3285
14	50.0000	178.625	357.251	46.3545	24.1606
15	60.0000	193.847	387.693	55.6254	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	400.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.1925	146.385	1.38859	0.483212
1	1.50000	77.0509	154.102	2.08289	0.724818
2	2.00000	80.3318	160.664	2.77719	0.966423
3	3.00000	85.9920	171.984	4.16578	1.44964
4	4.00000	90.9426	181.885	5.55438	1.93285
5	5.00000	95.4222	190.844	6.94297	2.41606
6	6.00000	99.5371	199.074	8.33157	2.89927
7	8.00000	106.907	213.814	11.1088	3.86569
8	10.0000	113.391	226.782	13.8859	4.83212
9	15.0000	127.175	254.351	20.8289	7.24818
10	20.0000	139.141	278.281	27.7719	9.66423
11	25.0000	150.265	300.529	34.7149	12.0803
12	30.0000	160.941	321.882	41.6578	14.4964
13	40.0000	181.579	363.157	55.5438	19.3285
14	50.0000	201.701	403.401	69.4297	24.1606

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	400.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.3804	146.761	1.57652	0.483212
1	1.50000	77.3328	154.666	2.36478	0.724818
2	2.00000	80.7076	161.415	3.15304	0.966423
3	3.00000	86.5557	173.111	4.72956	1.44964
4	4.00000	91.6943	183.389	6.30608	1.93285
5	5.00000	96.3618	192.724	7.88260	2.41606
6	6.00000	100.665	201.329	9.45912	2.89927
7	8.00000	108.410	216.821	12.6122	3.86569
8	10.0000	115.270	230.541	15.7652	4.83212
9	15.0000	129.994	259.989	23.6478	7.24818
10	20.0000	142.899	285.798	31.5304	9.66423
11	25.0000	154.963	309.926	39.4130	12.0803
12	30.0000	166.579	333.157	47.2956	14.4964
13	40.0000	189.096	378.191	63.0608	19.3285
14	50.0000	211.097	422.194	78.8260	24.1606

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	400.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.3804	146.761	1.57652	0.483212
1	1.50000	77.3328	154.666	2.36478	0.724818
2	2.00000	80.7076	161.415	3.15304	0.966423
3	3.00000	86.5557	173.111	4.72956	1.44964
4	4.00000	91.6943	183.389	6.30608	1.93285
5	5.00000	96.3618	192.724	7.88260	2.41606
6	6.00000	100.665	201.329	9.45912	2.89927
7	8.00000	108.410	216.821	12.6122	3.86569
8	10.0000	115.270	230.541	15.7652	4.83212
9	15.0000	129.994	259.989	23.6478	7.24818
10	20.0000	142.899	285.798	31.5304	9.66423
11	25.0000	154.963	309.926	39.4130	12.0803
12	30.0000	166.579	333.157	47.2956	14.4964
13	40.0000	189.096	378.191	63.0608	19.3285
14	50.0000	211.097	422.194	78.8260	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	400.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.3804	146.761	1.57652	0.483212
1	1.50000	77.3328	154.666	2.36478	0.724818
2	2.00000	80.7076	161.415	3.15304	0.966423
3	3.00000	86.5557	173.111	4.72956	1.44964
4	4.00000	91.6943	183.389	6.30608	1.93285
5	5.00000	96.3618	192.724	7.88260	2.41606
6	6.00000	100.665	201.329	9.45912	2.89927
7	8.00000	108.410	216.821	12.6122	3.86569
8	10.0000	115.270	230.541	15.7652	4.83212
9	15.0000	129.994	259.989	23.6478	7.24818
10	20.0000	142.899	285.798	31.5304	9.66423
11	25.0000	154.963	309.926	39.4130	12.0803
12	30.0000	166.579	333.157	47.2956	14.4964
13	40.0000	189.096	378.191	63.0608	19.3285
14	50.0000	211.097	422.194	78.8260	24.1606

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ℰTG	520.000	ℰX	20.0000	GAMMA0	0.0180000
ℰL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.5654	147.131	0.788452	0.483212
1	1.50000	77.2090	154.418	1.18268	0.724818
2	2.00000	80.2258	160.452	1.57690	0.966423
3	3.00000	85.3464	170.693	2.36536	1.44964
4	4.00000	89.7530	179.506	3.15381	1.93285
5	5.00000	93.6873	187.375	3.94226	2.41606
6	6.00000	97.2559	194.512	4.73071	2.89927
7	8.00000	103.524	207.048	6.30762	3.86569
8	10.0000	108.888	217.776	7.88452	4.83212
9	15.0000	119.791	239.583	11.8268	7.24818
10	20.0000	128.807	257.614	15.7690	9.66423
11	25.0000	136.954	273.908	19.7113	12.0803
12	30.0000	144.642	289.285	23.6536	14.4964
13	40.0000	159.291	318.582	31.5381	19.3285
14	50.0000	173.417	346.834	39.4226	24.1606
15	60.0000	187.254	374.509	47.3071	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ℨTG	520.000	ℨX	20.0000	GAMMA0	0.0180000
ℨL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.5776	147.155	0.800575	0.483212
1	1.50000	77.2271	154.454	1.20086	0.724818
2	2.00000	80.2501	160.500	1.60115	0.966423
3	3.00000	85.3828	170.766	2.40173	1.44964
4	4.00000	89.8015	179.603	3.20230	1.93285
5	5.00000	93.7479	187.496	4.00288	2.41606
6	6.00000	97.3286	194.657	4.80345	2.89927
7	8.00000	103.621	207.242	6.40460	3.86569
8	10.0000	109.009	218.019	8.00575	4.83212
9	15.0000	119.973	239.947	12.0086	7.24818
10	20.0000	129.049	258.099	16.0115	9.66423
11	25.0000	137.257	274.514	20.0144	12.0803
12	30.0000	145.006	290.012	24.0173	14.4964
13	40.0000	159.776	319.552	32.0230	19.3285
14	50.0000	174.023	348.046	40.0288	24.1606
15	60.0000	187.982	375.964	48.0345	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	520.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	73.7041	147.408	0.927090	0.483212
1	1.50000	77.4169	154.834	1.39064	0.724818
2	2.00000	80.5031	161.006	1.85418	0.966423
3	3.00000	85.7623	171.525	2.78127	1.44964
4	4.00000	90.3075	180.615	3.70836	1.93285
5	5.00000	94.3805	188.761	4.63545	2.41606
6	6.00000	98.0877	196.175	5.56254	2.89927
7	8.00000	104.633	209.266	7.41672	3.86569
8	10.0000	110.274	220.549	9.27090	4.83212
9	15.0000	121.871	243.742	13.9064	7.24818
10	20.0000	131.580	263.159	18.5418	9.66423
11	25.0000	140.420	280.840	23.1773	12.0803
12	30.0000	148.802	297.603	27.8127	14.4964
13	40.0000	164.836	329.673	37.0836	19.3285
14	50.0000	180.349	360.698	46.3545	24.1606
15	60.0000	195.573	391.145	55.6254	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	520.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	74.1656	148.331	1.38859	0.483212
1	1.50000	76.1092	156.218	2.08289	0.724818
2	2.00000	81.4261	162.852	2.77719	0.966423
3	3.00000	87.1468	174.294	4.16578	1.44964
4	4.00000	92.1535	184.307	5.55438	1.93285
5	5.00000	96.6880	193.376	6.94297	2.41606
6	6.00000	100.857	201.713	8.33157	2.89927
7	8.00000	108.325	216.650	11.1088	3.86569
8	10.0000	114.890	229.779	13.8859	4.83212
9	15.0000	128.794	257.587	20.8289	7.24818
10	20.0000	140.810	281.620	27.7719	9.66423
11	25.0000	151.958	303.915	34.7149	12.0803
12	30.0000	162.647	325.293	41.6578	14.4964
13	40.0000	183.297	366.593	55.5438	19.3285
14	50.0000	203.424	406.848	69.4297	24.1606

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	520.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	74.3535	148.707	1.57652	0.483212
1	1.50000	78.3911	156.782	2.36478	0.724818
2	2.00000	81.8019	163.604	3.15304	0.966423
3	3.00000	87.7106	175.421	4.72956	1.44964
4	4.00000	92.9052	185.810	6.30608	1.93285
5	5.00000	97.6276	195.255	7.88260	2.41606
6	6.00000	101.984	203.969	9.45912	2.89927
7	8.00000	109.828	219.657	12.6122	3.86569
8	10.0000	116.769	233.538	15.7652	4.83212
9	15.0000	131.612	263.225	23.6478	7.24818
10	20.0000	144.568	289.137	31.5304	9.66423
11	25.0000	156.656	313.312	39.4130	12.0803
12	30.0000	168.284	336.569	47.2956	14.4964
13	40.0000	190.814	381.627	63.0608	19.3285
14	50.0000	212.820	425.640	78.8260	24.1606

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ETG	520.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	74.3535	148.707	1.57652	0.483212
1	1.50000	78.3911	156.782	2.36478	0.724818
2	2.00000	81.8019	163.604	3.15304	0.966423
3	3.00000	87.7106	175.421	4.72956	1.44964
4	4.00000	92.9052	185.810	6.30608	1.93285
5	5.00000	97.6276	195.255	7.88260	2.41606
6	6.00000	101.984	203.969	9.45912	2.89927
7	8.00000	109.828	219.657	12.6122	3.86569
8	10.0000	116.769	233.538	15.7652	4.83212
9	15.0000	131.612	263.225	23.6478	7.24818
10	20.0000	144.568	289.137	31.5304	9.66423
11	25.0000	156.656	313.312	39.4130	12.0803
12	30.0000	168.284	336.569	47.2956	14.4964
13	40.0000	190.814	381.627	63.0608	19.3285
14	50.0000	212.820	425.640	78.8260	24.1606

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	520.000	ZX	20.0000	GAMMA0	0.0180000
ZL	300.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	74.3535	148.707	1.57652	0.483212
1	1.50000	78.3911	156.782	2.36478	0.724818
2	2.00000	81.8019	163.604	3.15304	0.966423
3	3.00000	87.7106	175.421	4.72956	1.44964
4	4.00000	92.9052	185.810	6.30608	1.93285
5	5.00000	97.6276	195.255	7.88260	2.41606
6	6.00000	101.984	203.969	9.45912	2.89927
7	8.00000	109.828	219.657	12.6122	3.86569
8	10.0000	116.769	233.538	15.7652	4.83212
9	15.0000	131.612	263.225	23.6478	7.24818
10	20.0000	144.568	289.137	31.5304	9.66423
11	25.0000	156.656	313.312	39.4130	12.0803
12	30.0000	168.284	336.569	47.2956	14.4964
13	40.0000	190.814	381.627	63.0608	19.3285
14	50.0000	212.820	425.640	78.8260	24.1606

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	58.8638	117.728	0.610620	0.485212
1	1.50000	61.1716	122.343	0.915931	0.724818
2	2.00000	62.9679	125.936	1.22124	0.966423
3	3.00000	65.8226	131.645	1.83186	1.44964
4	4.00000	68.1659	136.332	2.44248	1.93285
5	5.00000	70.2288	140.458	3.05310	2.41606
6	6.00000	72.1144	144.229	3.66372	2.89927
7	8.00000	75.5515	151.103	4.88496	3.86569
8	10.0000	78.7083	157.417	6.10620	4.83212
9	15.0000	85.9383	171.877	9.15931	7.24818
10	20.0000	92.6569	185.314	12.2124	9.66423
11	25.0000	99.0951	198.190	15.2655	12.0803
12	30.0000	105.356	210.712	18.3186	14.4964
13	40.0000	117.544	235.088	24.4248	19.3285
14	50.0000	129.451	258.902	30.5310	24.1606
15	60.0000	141.181	282.363	36.6372	28.9927

NPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
:TG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	58.8732	117.746	0.620009	0.483212
1	1.50000	61.1857	122.371	0.930014	0.724818
2	2.00000	62.9867	125.973	1.24002	0.966423
3	3.00000	65.8508	131.702	1.86003	1.44964
4	4.00000	68.2034	136.407	2.48004	1.93285
5	5.00000	70.2757	140.551	3.10005	2.41606
6	6.00000	72.1708	144.342	3.72006	2.89927
7	8.00000	75.6266	151.253	4.96007	3.86569
8	10.0000	78.8021	157.604	6.20009	4.83212
9	15.0000	86.0792	172.158	9.30014	7.24818
10	20.0000	92.8447	185.689	12.4002	9.66423
11	25.0000	99.3299	198.660	15.5002	12.0803
12	30.0000	105.638	211.276	18.6003	14.4964
13	40.0000	117.919	235.839	24.8004	19.3285
14	50.0000	129.921	259.841	31.0005	24.1606
15	60.0000	141.745	283.489	37.2006	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	58.9711	117.942	0.717989	0.483212
1	1.50000	61.3326	122.665	1.07698	0.724818
2	2.00000	63.1826	126.365	1.43598	0.966423
3	3.00000	66.1447	132.289	2.15397	1.44964
4	4.00000	68.5953	137.191	2.87196	1.93285
5	5.00000	70.7656	141.531	3.58995	2.41606
6	6.00000	72.7586	145.517	4.30794	2.89927
7	8.00000	76.4104	152.821	5.74391	3.86569
8	10.0000	79.7819	159.564	7.17989	4.83212
9	15.0000	87.5489	175.098	10.7698	7.24818
10	20.0000	94.8043	189.609	14.3598	9.66423
11	25.0000	101.779	203.559	17.9497	12.0803
12	30.0000	108.577	217.154	21.5397	14.4964
13	40.0000	121.839	243.677	28.7196	19.3285
14	50.0000	134.820	269.639	35.8995	24.1606
15	60.0000	147.624	295.247	43.0794	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.3285	118.657	1.07540	0.483212
1	1.50000	61.8688	123.738	1.61310	0.724818
2	2.00000	63.8975	127.795	2.15081	0.966423
3	3.00000	67.2170	134.434	3.22621	1.44964
4	4.00000	70.0250	140.050	4.30161	1.93285
5	5.00000	72.5527	145.105	5.37702	2.41606
6	6.00000	74.9031	149.806	6.45242	2.89927
7	8.00000	79.2697	158.539	8.60323	3.86569
8	10.0000	83.3561	166.712	10.7540	4.83212
9	15.0000	92.9101	185.820	16.1310	7.24818
10	20.0000	101.953	203.905	21.5081	9.66423
11	25.0000	110.715	221.429	26.8851	12.0803
12	30.0000	119.300	238.599	32.2621	14.4964
13	40.0000	136.135	272.270	43.0161	19.3285
14	50.0000	152.690	305.381	53.7702	24.1606
15	60.0000	169.068	338.137	64.5242	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.4741	118.948	1.22094	0.483212
1	1.50000	62.0871	124.174	1.83141	0.724818
2	2.00000	64.1885	128.377	2.44189	0.966423
3	3.00000	67.6536	135.307	3.66283	1.44964
4	4.00000	70.6071	141.214	4.88377	1.93285
5	5.00000	73.2804	146.561	6.10471	2.41606
6	6.00000	75.7764	151.553	7.32566	2.89927
7	8.00000	80.4341	160.868	9.76754	3.86569
8	10.0000	84.8115	169.623	12.2094	4.83212
9	15.0000	95.0932	190.186	18.3141	7.24818
10	20.0000	104.863	209.727	24.4189	9.66423
11	25.0000	114.353	228.706	30.5236	12.0803
12	30.0000	123.666	247.332	36.6283	14.4964
13	40.0000	141.957	283.913	48.8377	19.3285
14	50.0000	159.967	319.935	61.0471	24.1606
15	60.0000	177.801	355.601	73.2566	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	35.0000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.4741	118.948	1.22094	0.483212
1	1.50000	62.0871	124.174	1.83141	0.724818
2	2.00000	64.1885	128.377	2.44189	0.966423
3	3.00000	67.6536	135.307	3.66283	1.44964
4	4.00000	70.6071	141.214	4.88377	1.93285
5	5.00000	73.2804	146.561	6.10471	2.41606
6	6.00000	75.7764	151.553	7.32566	2.89927
7	8.00000	80.4341	160.868	9.76754	3.86569
8	10.0000	84.8115	169.623	12.2094	4.83212
9	15.0000	95.0932	190.186	18.3141	7.24818
10	20.0000	104.863	209.727	24.4189	9.66423
11	25.0000	114.353	228.706	30.5236	12.0803
12	30.0000	123.666	247.332	36.6283	14.4964
13	40.0000	141.957	283.913	48.8377	19.3285
14	50.0000	159.967	319.935	61.0471	24.1606
15	60.0000	177.801	355.601	73.2566	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ℰTG	35.0000	ℰX	20.0000	GAMMA0	0.0180000
ℰL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	59.4741	118.948	1.22094	0.483212
1	1.50000	62.0871	124.174	1.83141	0.724818
2	2.00000	64.1885	128.377	2.44189	0.966423
3	3.00000	67.6536	135.307	3.66283	1.44964
4	4.00000	70.6071	141.214	4.88377	1.93285
5	5.00000	73.2804	146.561	6.10471	2.41606
6	6.00000	75.7764	151.553	7.32566	2.89927
7	8.00000	80.4341	160.868	9.76754	3.86569
8	10.0000	84.8115	169.623	12.2094	4.83212
9	15.0000	95.0932	190.186	18.3141	7.24818
10	20.0000	104.863	209.727	24.4189	9.66423
11	25.0000	114.353	228.706	30.5236	12.0803
12	30.0000	123.666	247.332	36.6283	14.4964
13	40.0000	141.957	283.913	48.8377	19.3285
14	50.0000	159.967	319.935	61.0471	24.1606
15	60.0000	177.801	355.601	73.2566	28.9927

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.3459	130.692	0.610620	0.483212
1	1.50000	67.7600	135.520	0.915931	0.724818
2	2.00000	69.6457	139.291	1.22124	0.966423
3	3.00000	72.6400	145.280	1.83186	1.44964
4	4.00000	75.0841	150.168	2.44248	1.93285
5	5.00000	77.2212	154.442	3.05310	2.41606
6	6.00000	79.1623	158.325	3.66372	2.89927
7	8.00000	82.6746	165.349	4.88496	3.86569
8	10.0000	85.8784	171.757	6.10620	4.83212
9	15.0000	93.1719	186.344	9.15931	7.24818
10	20.0000	99.9229	199.846	12.2124	9.66423
11	25.0000	106.382	212.764	15.2655	12.0803
12	30.0000	112.658	225.316	18.3186	14.4964
13	40.0000	124.867	249.735	24.4248	19.3285
14	50.0000	136.791	273.582	30.5310	24.1606
15	60.0000	148.534	297.069	36.6372	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.3553	130.711	0.620009	0.483212
1	1.50000	67.7741	135.548	0.930014	0.724818
2	2.00000	69.6645	139.329	1.24002	0.966423
3	3.00000	72.6682	145.336	1.86003	1.44964
4	4.00000	75.1217	150.243	2.48004	1.93285
5	5.00000	77.2682	154.536	3.10005	2.41606
6	6.00000	79.2187	158.437	3.72006	2.89927
7	8.00000	82.7497	165.499	4.96007	3.86569
8	10.0000	85.9723	171.945	6.20009	4.83212
9	15.0000	93.3127	186.625	9.30014	7.24818
10	20.0000	100.111	200.221	12.4002	9.66423
11	25.0000	106.617	213.233	15.5002	12.0803
12	30.0000	112.940	225.879	18.6003	14.4964
13	40.0000	125.243	250.486	24.8004	19.3285
14	50.0000	137.261	274.521	31.0005	24.1606
15	60.0000	149.098	298.195	37.2006	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.4533	130.907	0.717989	0.483212
1	1.50000	67.9210	135.842	1.07698	0.724818
2	2.00000	69.8605	139.721	1.43598	0.966423
3	3.00000	72.9621	145.924	2.15397	1.44964
4	4.00000	75.5136	151.027	2.87196	1.93285
5	5.00000	77.7581	155.516	3.58995	2.41606
6	6.00000	79.8065	159.613	4.30794	2.89927
7	8.00000	83.5335	167.067	5.74391	3.86569
8	10.0000	86.9521	173.904	7.17989	4.83212
9	15.0000	94.7824	189.565	10.7698	7.24818
10	20.0000	102.070	204.140	14.3598	9.66423
11	25.0000	109.066	218.132	17.9497	12.0803
12	30.0000	115.879	231.758	21.5397	14.4964
13	40.0000	129.162	258.324	28.7196	19.3285
14	50.0000	142.160	284.319	35.8995	24.1606
15	60.0000	154.976	309.953	43.0794	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.8107	131.621	1.07540	0.483212
1	1.50000	68.4572	136.914	1.61310	0.724818
2	2.00000	70.5753	141.151	2.15081	0.966423
3	3.00000	74.0344	148.069	3.22621	1.44964
4	4.00000	76.9433	153.887	4.30161	1.93285
5	5.00000	79.5451	159.090	5.37702	2.41606
6	6.00000	81.9510	163.902	6.45242	2.89927
7	8.00000	86.3929	172.786	8.60323	3.86569
8	10.0000	90.5263	181.053	10.7540	4.83212
9	15.0000	100.144	200.287	16.1310	7.24818
10	20.0000	109.219	218.437	21.5081	9.66423
11	25.0000	118.001	236.003	26.8851	12.0803
12	30.0000	126.601	253.203	32.2621	14.4964
13	40.0000	143.459	286.918	43.0161	19.3285
14	50.0000	160.030	320.060	53.7702	24.1606
15	60.0000	176.421	352.843	64.5242	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.9562	131.912	1.22094	0.483212
1	1.50000	68.6755	137.351	1.83141	0.724818
2	2.00000	70.8664	141.733	2.44189	0.966423
3	3.00000	74.4710	148.942	3.66283	1.44964
4	4.00000	77.5254	155.051	4.88377	1.93285
5	5.00000	80.2728	160.546	6.10471	2.41606
6	6.00000	82.8243	165.649	7.32566	2.89927
7	8.00000	87.5572	175.114	9.76754	3.86569
8	10.0000	91.9817	183.963	12.2094	4.83212
9	15.0000	102.327	204.653	18.3141	7.24818
10	20.0000	112.129	224.259	24.4189	9.66423
11	25.0000	121.640	243.280	30.5236	12.0803
12	30.0000	130.968	261.935	36.6283	14.4964
13	40.0000	149.280	298.561	48.8377	19.3285
14	50.0000	167.307	334.614	61.0471	24.1606
15	60.0000	185.154	370.307	73.2566	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.9562	131.912	1.22094	0.483212
1	1.50000	68.6755	137.351	1.83141	0.724818
2	2.00000	70.8664	141.733	2.44189	0.966423
3	3.00000	74.4710	148.942	3.66283	1.44964
4	4.00000	77.5254	155.051	4.88377	1.93285
5	5.00000	80.2728	160.546	6.10471	2.41606
6	6.00000	82.8243	165.649	7.32566	2.89927
7	8.00000	87.5572	175.114	9.76754	3.86569
8	10.0000	91.9817	183.963	12.2094	4.83212
9	15.0000	102.327	204.653	18.3141	7.24818
10	20.0000	112.129	224.259	24.4189	9.66423
11	25.0000	121.640	243.280	30.5236	12.0803
12	30.0000	130.968	261.935	36.6283	14.4964
13	40.0000	149.280	298.561	48.8377	19.3285
14	50.0000	167.307	334.614	61.0471	24.1606
15	60.0000	185.154	370.307	73.2566	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	250.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.9562	131.912	1.22094	0.483212
1	1.50000	68.6755	137.351	1.83141	0.724818
2	2.00000	70.8664	141.733	2.44189	0.966423
3	3.00000	74.4710	148.942	3.66283	1.44964
4	4.00000	77.5254	155.051	4.88377	1.93285
5	5.00000	80.2728	160.546	6.10471	2.41606
6	6.00000	82.8243	165.649	7.32566	2.89927
7	8.00000	87.5572	175.114	9.76754	3.86569
8	10.0000	91.9817	183.963	12.2094	4.83212
9	15.0000	102.327	204.653	18.3141	7.24818
10	20.0000	112.129	224.259	24.4189	9.66423
11	25.0000	121.640	243.280	30.5236	12.0803
12	30.0000	130.968	261.935	36.6283	14.4964
13	40.0000	149.280	298.561	48.8377	19.3285
14	50.0000	167.307	334.614	61.0471	24.1606
15	60.0000	185.154	370.307	73.2566	28.9927

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6809	131.362	0.610620	0.483212
1	1.50000	69.2027	138.405	0.915931	0.724818
2	2.00000	72.0499	144.100	1.22124	0.966423
3	3.00000	76.8117	153.623	1.83186	1.44964
4	4.00000	80.5143	161.029	2.44248	1.93285
5	5.00000	83.8043	167.609	3.05310	2.41606
6	6.00000	86.7878	173.576	3.66372	2.89927
7	8.00000	92.0568	184.114	4.88496	3.86569
8	10.0000	96.6196	193.239	6.10620	4.83212
9	15.0000	106.054	212.108	9.15931	7.24818
10	20.0000	113.942	227.884	12.2124	9.66423
11	25.0000	121.092	242.184	15.2655	12.0803
12	30.0000	127.846	255.693	18.3186	14.4964
13	40.0000	140.724	281.447	24.4248	19.3285
14	50.0000	153.140	306.279	30.5310	24.1606
15	60.0000	165.294	330.588	36.6372	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.6903	131.381	0.620009	0.483212
1	1.50000	69.2168	138.434	0.930014	0.724818
2	2.00000	72.0687	144.137	1.24002	0.966423
3	3.00000	76.8399	153.680	1.86003	1.44964
4	4.00000	80.5519	161.104	2.48004	1.93285
5	5.00000	83.8513	167.703	3.10005	2.41606
6	6.00000	86.8442	173.688	3.72006	2.89927
7	8.00000	92.1319	184.264	4.96007	3.86569
8	10.0000	96.7135	193.427	6.20009	4.83212
9	15.0000	106.195	212.390	9.30014	7.24818
10	20.0000	114.130	228.260	12.4002	9.66423
11	25.0000	121.326	242.653	15.5002	12.0803
12	30.0000	128.128	256.256	18.6003	14.4964
13	40.0000	141.099	282.198	24.8004	19.3285
14	50.0000	153.609	307.218	31.0005	24.1606
15	60.0000	165.857	331.715	37.2006	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	65.7883	131.577	0.717989	0.483212
1	1.50000	69.3638	138.728	1.07698	0.724818
2	2.00000	72.2646	144.529	1.43598	0.966423
3	3.00000	77.1338	154.268	2.15397	1.44964
4	4.00000	80.9438	161.888	2.87196	1.93285
5	5.00000	84.3412	168.682	3.58995	2.41606
6	6.00000	87.4320	174.864	4.30794	2.89927
7	8.00000	92.9157	185.831	5.74391	3.86569
8	10.0000	97.6933	195.387	7.17989	4.83212
9	15.0000	107.665	215.329	10.7698	7.24818
10	20.0000	116.090	232.179	14.3598	9.66423
11	25.0000	123.776	247.552	17.9497	12.0803
12	30.0000	131.067	262.135	21.5397	14.4964
13	40.0000	145.018	290.037	28.7196	19.3285
14	50.0000	158.508	317.016	35.8995	24.1606
15	60.0000	171.736	343.473	43.0794	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.1457	132.291	1.07540	0.483212
1	1.50000	69.8999	139.800	1.61310	0.724818
2	2.00000	72.9794	145.959	2.15081	0.966423
3	3.00000	78.2061	156.412	3.22621	1.44964
4	4.00000	82.3735	164.747	4.30161	1.93285
5	5.00000	86.1283	172.257	5.37702	2.41606
6	6.00000	89.5765	179.153	6.45242	2.89927
7	8.00000	95.7750	191.550	8.60323	3.86569
8	10.0000	101.267	202.535	10.7540	4.83212
9	15.0000	113.026	226.052	16.1310	7.24818
10	20.0000	123.238	246.476	21.5081	9.66423
11	25.0000	132.711	265.423	26.8851	12.0803
12	30.0000	141.790	283.580	32.2621	14.4964
13	40.0000	159.315	318.630	43.0161	19.3285
14	50.0000	176.379	352.757	53.7702	24.1606
15	60.0000	193.181	386.362	64.5242	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.2913	132.583	1.22094	0.483212
1	1.50000	70.1182	140.236	1.83141	0.724818
2	2.00000	73.2705	146.541	2.44189	0.966423
3	3.00000	78.6427	157.285	3.66283	1.44964
4	4.00000	82.9556	165.911	4.88377	1.93285
5	5.00000	86.8560	173.712	6.10471	2.41606
6	6.00000	90.4498	180.900	7.32566	2.89927
7	8.00000	96.9393	193.879	9.76754	3.86569
8	10.0000	102.723	205.446	12.2094	4.83212
9	15.0000	115.209	230.418	18.3141	7.24818
10	20.0000	126.149	252.297	24.4189	9.66423
11	25.0000	136.350	272.700	30.5236	12.0803
12	30.0000	146.156	292.312	36.6283	14.4964
13	40.0000	165.136	330.273	48.8377	19.3285
14	50.0000	183.656	367.311	61.0471	24.1606
15	60.0000	201.913	403.827	73.2566	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.2913	132.583	1.22094	0.483212
1	1.50000	70.1182	140.236	1.83141	0.724818
2	2.00000	73.2705	146.541	2.44189	0.966423
3	3.00000	78.6427	157.285	3.66283	1.44964
4	4.00000	82.9556	165.911	4.88377	1.93285
5	5.00000	86.8560	173.712	6.10471	2.41606
6	6.00000	90.4498	180.900	7.32566	2.89927
7	8.00000	96.9393	193.879	9.76754	3.86569
8	10.0000	102.723	205.446	12.2094	4.83212
9	15.0000	115.209	230.418	18.3141	7.24818
10	20.0000	126.149	252.297	24.4189	9.66423
11	25.0000	136.350	272.700	30.5236	12.0803
12	30.0000	146.155	292.312	36.6283	14.4964
13	40.0000	165.136	330.273	48.8377	19.3285
14	50.0000	183.656	367.311	61.0471	24.1606
15	60.0000	201.913	403.827	73.2566	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	500.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	66.2913	132.583	1.22094	0.488212
1	1.50000	70.1182	140.236	1.83141	0.724818
2	2.00000	73.2705	146.541	2.44189	0.966423
3	3.00000	78.6427	157.285	3.66283	1.44964
4	4.00000	82.9556	165.911	4.88377	1.93285
5	5.00000	86.8560	173.712	6.10471	2.41606
6	6.00000	90.4498	180.900	7.32566	2.89927
7	8.00000	96.9393	193.879	9.76754	3.86569
8	10.0000	102.723	205.446	12.2094	4.83212
9	15.0000	115.209	230.418	18.3141	7.24818
10	20.0000	126.149	252.297	24.4189	9.66423
11	25.0000	136.350	272.700	30.5236	12.0803
12	30.0000	146.156	292.312	36.6283	14.4964
13	40.0000	165.136	330.273	48.8377	19.3285
14	50.0000	183.656	367.311	61.0471	24.1606
15	60.0000	201.913	403.827	73.2566	28.9927

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	600.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.0078	142.016	0.610620	0.483212
1	1.50000	75.0449	150.090	0.915931	0.724818
2	2.00000	78.3272	156.654	1.22124	0.966423
3	3.00000	83.5686	167.137	1.83186	1.44964
4	4.00000	87.7740	175.548	2.44248	1.93285
5	5.00000	91.4559	182.912	3.05310	2.41606
6	6.00000	94.6603	189.321	3.66372	2.89927
7	8.00000	100.365	200.731	4.88496	3.86569
8	10.0000	105.330	210.660	6.10620	4.83212
9	15.0000	115.511	231.022	9.15931	7.24818
10	20.0000	123.814	247.627	12.2124	9.66423
11	25.0000	131.193	262.385	15.2655	12.0803
12	30.0000	138.084	276.169	18.3186	14.4964
13	40.0000	151.113	302.226	24.4248	19.3285
14	50.0000	163.610	327.220	30.5310	24.1606
15	60.0000	175.816	351.632	36.6372	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	600.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.0172	142.034	0.620009	0.483212
1	1.50000	75.0590	150.118	0.930014	0.724818
2	2.00000	78.3460	156.692	1.24002	0.966423
3	3.00000	83.5968	167.194	1.86003	1.44964
4	4.00000	87.8115	175.623	2.48004	1.93285
5	5.00000	91.5028	183.006	3.10005	2.41606
6	6.00000	94.7167	189.433	3.72006	2.89927
7	8.00000	100.440	200.881	4.96007	3.86569
8	10.0000	105.424	210.848	6.20009	4.83212
9	15.0000	115.652	231.303	9.30014	7.24818
10	20.0000	124.001	248.003	12.4002	9.66423
11	25.0000	131.427	262.855	15.5002	12.0803
12	30.0000	138.366	276.732	18.6003	14.4964
13	40.0000	151.489	302.977	24.8004	19.3285
14	50.0000	164.080	328.159	31.0005	24.1606
15	60.0000	176.379	352.759	37.2006	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ZTG	600.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.1152	142.230	0.717989	0.483212
1	1.50000	75.2059	150.412	1.07698	0.724818
2	2.00000	78.5420	157.084	1.43598	0.966423
3	3.00000	83.8908	167.782	2.15397	1.44964
4	4.00000	88.2034	176.407	2.87196	1.93285
5	5.00000	91.9927	183.985	3.58995	2.41606
6	6.00000	95.3045	190.609	4.30794	2.89927
7	8.00000	101.224	202.448	5.74391	3.86569
8	10.0000	106.404	212.808	7.17989	4.83212
9	15.0000	117.121	234.243	10.7698	7.24818
10	20.0000	125.961	251.922	14.3598	9.66423
11	25.0000	133.877	267.754	17.9497	12.0803
12	30.0000	141.305	282.611	21.5397	14.4964
13	40.0000	155.408	310.815	28.7196	19.3285
14	50.0000	168.979	337.957	35.8995	24.1606
15	60.0000	182.258	364.516	43.0794	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	600.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.4726	142.945	1.07540	0.483212
1	1.50000	75.7420	151.484	1.61310	0.724818
2	2.00000	79.2568	158.514	2.15081	0.966423
3	3.00000	84.9630	169.926	3.22621	1.44964
4	4.00000	89.6331	179.266	4.30161	1.93285
5	5.00000	93.7798	187.560	5.37702	2.41606
6	6.00000	97.4490	194.898	6.45242	2.89927
7	8.00000	104.084	208.167	8.60323	3.86569
8	10.0000	109.978	219.956	10.7540	4.83212
9	15.0000	122.482	244.965	16.1310	7.24818
10	20.0000	133.109	266.219	21.5081	9.66423
11	25.0000	142.812	285.624	26.8851	12.0803
12	30.0000	152.028	304.056	32.2621	14.4964
13	40.0000	169.704	339.409	43.0161	19.3285
14	50.0000	186.849	373.698	53.7702	24.1606
15	60.0000	203.703	407.406	64.5242	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ZTG	600.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.6181	143.236	1.22094	0.483212
1	1.50000	75.9604	151.921	1.83141	0.724818
2	2.00000	79.5479	159.096	2.44189	0.966423
3	3.00000	85.3996	170.799	3.66283	1.44964
4	4.00000	90.2153	180.431	4.88377	1.93285
5	5.00000	94.5075	189.015	6.10471	2.41606
6	6.00000	98.3223	196.645	7.32566	2.89927
7	8.00000	105.248	210.496	9.76754	3.86569
8	10.0000	111.433	222.867	12.2094	4.83212
9	15.0000	124.666	249.331	18.3141	7.24818
10	20.0000	136.020	272.040	24.4189	9.66423
11	25.0000	146.451	292.901	30.5236	12.0803
12	30.0000	156.394	312.788	36.6283	14.4964
13	40.0000	175.526	351.052	48.8377	19.3285
14	50.0000	194.126	388.252	61.0471	24.1606
15	60.0000	212.435	424.871	73.2566	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
℄TG	600.000	℄X	20.0000	GAMMA0	0.0180000
℄L	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.6181	143.236	1.22094	0.483212
1	1.50000	75.9604	151.921	1.83141	0.724818
2	2.00000	79.5479	159.096	2.44189	0.966423
3	3.00000	85.3996	170.799	3.66283	1.44964
4	4.00000	90.2153	180.431	4.88377	1.93285
5	5.00000	94.5075	189.015	6.10471	2.41606
6	6.00000	98.3223	196.645	7.32566	2.89927
7	8.00000	105.248	210.496	9.76754	3.86569
8	10.0000	111.433	222.867	12.2094	4.83212
9	15.0000	124.666	249.331	18.3141	7.24818
10	20.0000	136.020	272.040	24.4189	9.66423
11	25.0000	146.451	292.901	30.5236	12.0803
12	30.0000	156.394	312.788	36.6283	14.4964
13	40.0000	175.526	351.052	48.8377	19.3285
14	50.0000	194.126	388.252	61.0471	24.1606
15	60.0000	212.435	424.871	73.2566	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ZTG	600.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.6181	143.236	1.22094	0.483212
1	1.50000	75.9604	151.921	1.83141	0.724818
2	2.00000	79.5479	159.096	2.44189	0.966423
3	3.00000	85.3996	170.799	3.66283	1.44964
4	4.00000	90.2153	180.431	4.88377	1.93285
5	5.00000	94.5075	189.015	6.10471	2.41606
6	6.00000	98.3223	196.645	7.32566	2.89927
7	8.00000	105.248	210.496	9.76754	3.86569
8	10.0000	111.433	222.867	12.2094	4.83212
9	15.0000	124.666	249.331	18.3141	7.24818
10	20.0000	136.020	272.040	24.4189	9.66423
11	25.0000	146.451	292.901	30.5236	12.0803
12	30.0000	156.394	312.788	36.6283	14.4964
13	40.0000	175.526	351.052	48.8377	19.3285
14	50.0000	194.126	388.252	61.0471	24.1606
15	60.0000	212.435	424.871	73.2566	28.9927

ZTG

INPUT PARAMETERS

LWA	1.00000	FREQ	9.00000	CS	4947.00
ZTG	671.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.4612	142.922	0.610620	0.483212
1	1.50000	75.5944	151.189	0.915931	0.724818
2	2.00000	78.9646	157.929	1.22124	0.966423
3	3.00000	84.3379	168.676	1.83186	1.44964
4	4.00000	88.6208	177.242	2.44248	1.93285
5	5.00000	92.3628	184.726	3.05310	2.41606
6	6.00000	95.5913	191.183	3.66372	2.89927
7	8.00000	101.343	202.685	4.88496	3.86569
8	10.0000	106.349	212.699	6.10620	4.83212
9	15.0000	116.604	233.208	9.15931	7.24818
10	20.0000	124.944	249.888	12.2124	9.66423
11	25.0000	132.340	264.681	15.2655	12.0803
12	30.0000	139.241	278.483	18.3186	14.4964
13	40.0000	152.278	304.557	24.4248	19.3285
14	50.0000	164.779	329.558	30.5310	24.1606
15	60.0000	176.987	353.974	36.6372	28.9927

INPUT PARAMETERS

LWA	2.00000	FREQ	9.00000	CS	4947.00
ZTG	671.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.4706	142.941	0.620009	0.483212
1	1.50000	75.6085	151.217	0.930014	0.724818
2	2.00000	78.9833	157.967	1.24002	0.966423
3	3.00000	84.3660	168.732	1.86003	1.44964
4	4.00000	88.6584	177.317	2.48004	1.93285
5	5.00000	92.4098	184.820	3.10005	2.41606
6	6.00000	95.6476	191.295	3.72006	2.89927
7	8.00000	101.418	202.835	4.96007	3.86569
8	10.0000	106.443	212.886	6.20009	4.83212
9	15.0000	116.745	233.490	9.30014	7.24818
10	20.0000	125.132	250.263	12.4002	9.66423
11	25.0000	132.575	265.150	15.5002	12.0803
12	30.0000	139.523	279.046	18.6003	14.4964
13	40.0000	152.654	305.308	24.8004	19.3285
14	50.0000	165.249	330.497	31.0005	24.1606
15	60.0000	177.550	355.101	37.2006	28.9927

INPUT PARAMETERS

LWA	3.00000	FREQ	9.00000	CS	4947.00
ℰTG	671.000	ℨX	20.0000	GAMMA0	0.0180000
ℨL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.5686	143.137	0.717989	0.483212
1	1.50000	75.7555	151.511	1.07698	0.724818
2	2.00000	79.1793	158.359	1.43598	0.966423
3	3.00000	84.6600	169.320	2.15397	1.44964
4	4.00000	89.0503	178.101	2.87196	1.93285
5	5.00000	92.8997	185.799	3.58995	2.41606
6	6.00000	96.2355	192.471	4.30794	2.89927
7	8.00000	102.202	204.403	5.74391	3.86569
8	10.0000	107.423	214.846	7.17989	4.83212
9	15.0000	118.215	236.429	10.7698	7.24818
10	20.0000	127.091	254.183	14.3598	9.66423
11	25.0000	135.025	270.049	17.9497	12.0803
12	30.0000	142.462	284.925	21.5397	14.4964
13	40.0000	156.573	313.146	28.7196	19.3285
14	50.0000	170.148	340.295	35.8995	24.1606
15	60.0000	183.429	366.858	43.0794	28.9927

INPUT PARAMETERS

LWA	4.00000	FREQ	9.00000	CS	4947.00
ZTG	671.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	71.9260	143.852	1.07540	0.483212
1	1.50000	76.2916	152.583	1.61310	0.724818
2	2.00000	79.8941	159.788	2.15081	0.966423
3	3.00000	85.7322	171.464	3.22621	1.44964
4	4.00000	90.4800	180.960	4.30161	1.93285
5	5.00000	94.6867	189.373	5.37702	2.41606
6	6.00000	98.3800	196.760	6.45242	2.89927
7	8.00000	105.061	210.122	8.60323	3.86569
8	10.0000	110.997	221.994	10.7540	4.83212
9	15.0000	123.576	247.151	16.1310	7.24818
10	20.0000	134.240	268.479	21.5081	9.66423
11	25.0000	143.960	287.920	26.8851	12.0803
12	30.0000	153.185	306.370	32.2621	14.4964
13	40.0000	170.870	341.739	43.0161	19.3285
14	50.0000	188.018	376.036	53.7702	24.1606
15	60.0000	204.874	409.748	64.5242	28.9927

INPUT PARAMETERS

LWA	6.00000	FREQ	9.00000	CS	4947.00
ETG	671.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.0716	144.143	1.22094	0.488212
1	1.50000	76.5099	153.020	1.83141	0.724818
2	2.00000	80.1852	160.370	2.44189	0.966423
3	3.00000	86.1688	172.338	3.66283	1.44964
4	4.00000	91.0621	182.124	4.88377	1.93285
5	5.00000	95.4144	190.829	6.10471	2.41606
6	6.00000	99.2532	198.506	7.32566	2.89927
7	8.00000	106.225	212.450	9.76754	3.86569
8	10.0000	112.453	224.905	12.2094	4.83212
9	15.0000	125.759	251.518	18.3141	7.24818
10	20.0000	137.150	274.301	24.4189	9.66423
11	25.0000	147.598	295.197	30.5236	12.0803
12	30.0000	157.551	315.102	36.6283	14.4964
13	40.0000	176.691	353.382	48.8377	19.3285
14	50.0000	195.295	390.590	61.0471	24.1606
15	60.0000	213.606	427.213	73.2566	28.9927

INPUT PARAMETERS

LWA	8.00000	FREQ	9.00000	CS	4947.00
ZTG	671.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.0716	144.143	1.22094	0.483212
1	1.50000	76.5099	153.020	1.83141	0.724818
2	2.00000	80.1852	160.370	2.44189	0.966423
3	3.00000	86.1688	172.338	3.66283	1.44964
4	4.00000	91.0621	182.124	4.88377	1.93285
5	5.00000	95.4144	190.829	6.10471	2.41606
6	6.00000	99.2532	198.506	7.32566	2.89927
7	8.00000	106.225	212.450	9.76754	3.86569
8	10.0000	112.453	224.905	12.2094	4.83212
9	15.0000	125.759	251.518	18.3141	7.24818
10	20.0000	137.150	274.301	24.4189	9.66423
11	25.0000	147.598	295.197	30.5236	12.0803
12	30.0000	157.551	315.102	36.6283	14.4964
13	40.0000	176.691	353.382	48.8377	19.3285
14	50.0000	195.295	390.590	61.0471	24.1606
15	60.0000	213.606	427.213	73.2566	28.9927

INPUT PARAMETERS

LWA	10.0000	FREQ	9.00000	CS	4947.00
ETG	671.000	ZX	20.0000	GAMMA0	0.0180000
ZL	500.000	TEMP	60.0000	GAMMA1	-0.333300

	RANGE	HSC	HSCSUM	HSSC	HKSC
0	1.00000	72.0716	144.143	1.22094	0.483212
1	1.50000	76.5099	153.020	1.83141	0.724818
2	2.00000	80.1852	160.370	2.44189	0.966423
3	3.00000	86.1688	172.338	3.66283	1.44964
4	4.00000	91.0621	182.124	4.88377	1.93285
5	5.00000	95.4144	190.829	6.10471	2.41606
6	6.00000	99.2532	198.506	7.32566	2.89927
7	8.00000	106.225	212.450	9.76754	3.86569
8	10.0000	112.453	224.905	12.2094	4.83212
9	15.0000	125.759	251.518	18.3141	7.24818
10	20.0000	137.150	274.301	24.4189	9.66423
11	25.0000	147.598	295.197	30.5236	12.0803
12	30.0000	157.551	315.102	36.6283	14.4964
13	40.0000	176.691	353.382	48.8377	19.3285
14	50.0000	195.295	390.590	61.0471	24.1606
15	60.0000	213.606	427.213	73.2566	28.9927